Southeast Quail Study Group State Reports

14th Annual Meeting

July 15-18, 2008

Lafayette, Louisiana

Hosted By:

Table of Contents

2008 SOUTHEAST QUAIL STUDY GROUP MEETING
STATE REPORT—ALABAMA

Submitted by: Stan Stewart, Alabama Wildlife & Freshwater Fisheries

Bobwhite Population Status

Alabama breeding bobwhite populations have declined by more than eighty percent since breeding bird surveys were initiated in 1966. A statewide five-year average of approximately 45 whistling males per survey route (1966-1970) has declined to 8 whistling males per route (2001-2005). The dramatic loss of bobwhites is reflected in quail hunting activity and quail harvests. During the 1966-67 hunting season, 92,845 quail hunters hunted 964,456 man-days and harvested 2.77 million quail. In 1980-81, 66,288 quail hunters hunted 509,384 man-days and harvested 1.38 million quail. As of the 2006-07 hunting season, quail hunter numbers are down to 13,000, quail hunting activity to 59,600 man-days, and bobwhite harvest to 0.26 million.

Bobwhite Restoration Initiatives

Various habitat initiatives continue on public lands across the state to restore habitat types suitable for bobwhites. The Alabama Division of Wildlife and Freshwater Fisheries initiated a shortleaf pine-bluestem restoration project on the Freedom Hills Wildlife Management Area in the northwest part of the state. This project will restore a land cover type that was historically prevalent in the region and will benefit a number of declining wildlife species including the bobwhite. A longleaf pine restoration project is underway on the Barbour Wildlife Management Area in southeast Alabama to restore a longleaf pine-bluestem community to benefit bobwhites and other species dependent on fire-maintained habitats. A longleaf pine renovation project is in progress on the Fred T. Stimpson Wildlife Sanctuary in southwest Alabama. Thinnings and prescribed burns are utilized to create stands of open canopy longleaf and native herbaceous groundcovers to provide improved habitat for bobwhites and other wildlife species.

The USDA Forest Service, in cooperation with the Alabama Division of Wildlife and Freshwater Fisheries and other partners such as Quail Unlimited, Alabama Power, and the National Fish and Wildlife Foundation, continues with the Choccolocco Upland Initiative on the Choccolocco Wildlife Management Area and Shoal Creek District of Talladega National Forest. The initiative tailors prescribed fire regimes and forest management practices to enhance bobwhite productivity within a context of longleaf pine restoration and red-cockaded woodpecker management. The Forest Service is engaged in a similar initiative with its Elliotts Creek Quail Area on the Oakmulgee Wildlife Management Area, Oakmulgee District of Talladega National Forest.

A Conservation Reserve Program State Acres for Wildlife (SAFE) project was approved for the Black Prairie region of west Alabama as a joint project with Mississippi. The goal of the project is to restore native grassland habitats for rare, threatened, and declining species that are dependent on native prairie communities within the Blackland Prairie region of Alabama and Mississippi. The objective is to enroll 5,000 acres within three years. Sign-up in Alabama began in June, 2008.

The Alabama Quail Council has been recently active with efforts to create a source of funding for bobwhite restoration in the state and to develop a bobwhite restoration plan in accordance with the Northern Bobwhite Conservation Initiative.

Private Lands Outreach

The Alabama Division of Wildlife and Freshwater Fisheries and USDA Natural Resources Conservation Service continue in a cooperative agreement that funds four wildlife biologist positions to deliver wildlife technical assistance to landowners who participate in USDA conservation programs. The biologists are employed by ADWFF and located in NRCS offices.

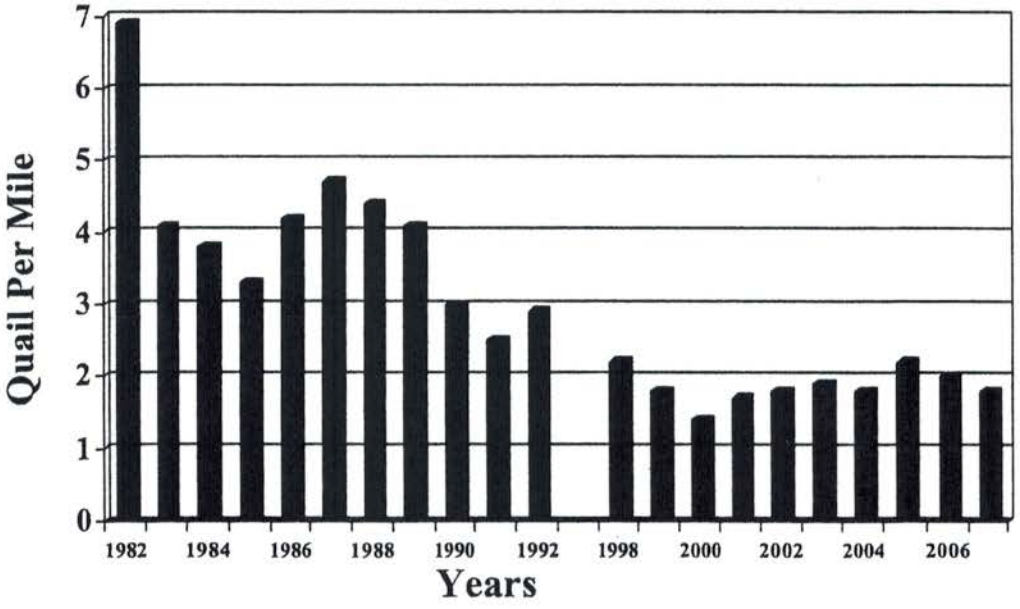
State of Arkansas
Quail Program Annual Report
Southeast Quail Study Group Meeting
July 15-18-2008
Lafayette, Louisiana

Bobwhite Population Status

According to Breeding Bird Survey data, northern bobwhite numbers in Arkansas declined by 42 percent during the period of 1966-1980. This rate of decline accelerated to 5 percent annually during the period of 1980-1998.

Currently, the Arkansas Game & Fish Commission continues to monitor population trends annually through quail call counts conducted during late May and quail brood surveys conducted from June 15-August 31. Since the inception of these survey methods in the early 1980's, data from both of these surveys also indicate a precipitous decline in quail numbers in Arkansas (Figure 1 & 2). In 2004, the number of routes was increased to 2 routes per county (150 total routes). The data presented below was derived from only those 57 routes that have been surveyed annually throughout the entire survey period.

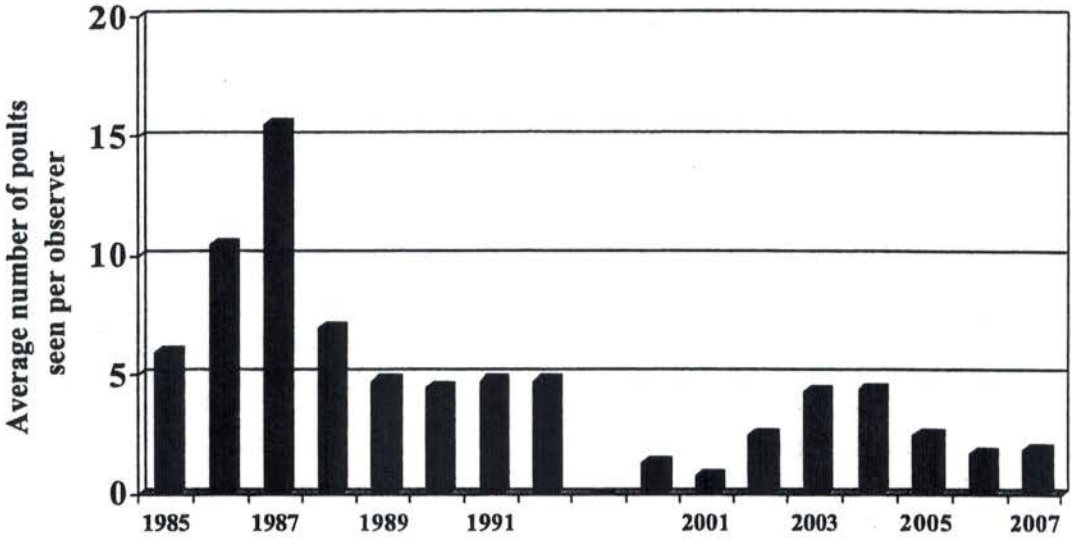
Figure 1. Quail Call Count Trend 1982-1992, 1998-2007



The 2007 statewide average of 1.8 quail heard per mile represents a 10% decrease from the 2.0 quail heard per mile during 2005. The 2007 quail call count average is 29% above the survey's

low point of 1.4 quail heard per mile in 2000. Regionally, during the 2007 survey, the number of quail heard per mile ranged from 0.5 in the Gulf Coastal Plain to 2.9 in the Ouachitas.

Figure 2. Quail Brood Survey Trend 1985-1992, 2000-2007



The 2007 quail brood surveys indicated a statewide average of 1.9 poults seen per observer. This represents a 12% increase from the 1.7 poults seen per observer in 2006.

Quail Management Initiatives

As a result of the approval of the Arkansas Game & Fish Commission's Strategic Quail Management Plan in May 2001 and the subsequent release of the Northern Bobwhite Conservation Initiative (NBCI) in March 2002, the Arkansas Quail Committee has been formed in an attempt to achieve the goals outlined in the two plans. The Arkansas Quail Committee is a coalition of representatives from several organizations including the Arkansas Game & Fish Commission, NRCS, U.S. Forest Service, U.S. Fish & Wildlife Service, Cooperative Extension Service, FSA, Arkansas Forestry Commission, Arkansas Natural Heritage Commission, Quail Unlimited, industrial timber companies, private consultants and academia.

The first action item of the Arkansas Quail Committee has been to initiate the development of 2 quail "focal areas" within each of the three Bird Conservation Regions (BCRs) within the state as outlined in the NBCI. At this time, two focal areas have been identified (one in Searcy Co. and one in Fulton Co.), both of which lie within the Central Hardwoods BCR of northern Arkansas. Each of these focal areas are comprised of relatively contiguous tracts of property each in excess of 17,000 acres.

The two quail focal areas were declared as "Special Project Areas" for the 2003-2008 WHIP sign-ups. Along with the status of "Special Project Area", each focal area received an

allocation of up to $100,000 in WHIP funding for each sign-up to provide 75% cost-share on select practices to landowners within the focal areas. In addition, the Arkansas Game & Fish Commission provided the remaining 25% cost-share on those same practices to insure that the landowners did not incur any out-of-pocket expenses. In 2006 we initiated a rental payment of $40/ac for open lands to increase enrollment of this type of land. To date, there have been over 11,000 acres enrolled in WHIP within the Fulton Co. area and over 1,600 acres enrolled within the Searcy Co. area. During the 2007 WHIP sign-up, eight additional landowners in Fulton Co. and one additional landowner in Searcy Co. enrolled in the program. However, many interested landowners did not get in due to a decrease in available WHIP funding.

Initial habitat manipulations began within the two focal areas in October 2003. Meanwhile, members of the Arkansas Quail Committee have been working to gather baseline data on these two areas pertaining to quail numbers, resident songbird numbers as well as vegetative data in order to document responses to future habitat manipulations.

Two new focal areas were identified and initiated in 2007. Those areas are a 9,700 acre area near Damascus in Central Arkansas and an area near Fort Chaffee consisting of over 160,000 acres. The Damascus area is being funded with WHIP (50%), AGFC (25%), and Southwestern Energy (25%) monies and had 11 total landowners enrolled in the first two years. The Damascus focal area was expanded to around 35,000 acres in its second year. The Fort Chaffee area is being funded by EQUIP and had 5 landowners enroll in the first year. The Fort Chaffee area's focus is on rotational grazing with inclusion of at least one NWSG paddock.

Additionally, members of the Arkansas Quail Committee worked in partnership to develop a Landowner Incentive Program (LIP) proposal that was funded in February 2004 through the U.S. Fish & Wildlife Service. The grant is a partnership between the Arkansas Game & Fish Commission, The Nature Conservancy, Arkansas Forestry Commission and Arkansas Natural Heritage Commission and has establish 2 burn crews that conduct prescribed burns on private lands in Arkansas within 5 pre-determined areas (including the two quail focal areas within the Central Hardwoods BCR). During this past burn season, these two burn crews conducted 16 prescribed burns consisting of 2,002 acres in three focal areas. This brings the to-date total for LIP to 10,184 acres over 58 burns. Burning was somewhat hindered this past year due to adverse weather conditions. In addition to prescribed burns, a landowner workshop was conducted in Fulton County on 9/5/07. Sixty-eight guests from the Interior Highlands focal area attended a day of land management presentations and unfortunately our field portion was rained out in the afternoon. A private landowner prescribed fire workshop was also held in April 19, 2008 at the Batesville Experiment Station. Landowners were introduced to prescribed fire through half day of classroom lecture and activities and a half day of prescribed fire. There were 25 landowners in attendance.

In order to promote the Continuous-CRP practice CP-33, several landowner meetings were held around the state in strategically selected agricultural communities during January and February 2008. Overall, the meetings were well received with attendance averaging about 40 individuals. The approval of CP-33 contracts has been slow due to the extensive coordination required between our agency, NRCS, FSA and the landowners. In addition, once planting season arrived, many landowners are now waiting until after their crops have been harvested this fall to

enroll in the program. The AR Quail Committee intends to monitor contracts spatially to identify "clusters" of CP-33 contracts that will serve as focal areas for the Mississippi Alluvial Valley BCR. As of May 2008 more than 5,000 acres have been allocated in Arkansas.

Arkansas has also had a SAFE program approved. Part of that will be CP38E – Native grasslands. There are 9,700 acres of SAFE approved for Arkansas and 4,000 acres will be native grass with the ability to plant up to 5% covey headquarters throughout those whole grass fields. Response for the SAFE practices appears to be very positive, with one county already reporting they have signed up 1,000 acres of grassland.

Research

A research grant received through the NRCS/MSU Bobwhite Restoration Project has provided funding for a combined research project on both the Searcy Co. and Fulton Co. focal areas. The project is titled: "RESPONSE OF NORTHERN BOBWHITE POPULATIONS AND THE ASSOCIATED AVIAN COMMUNITY TO LANDSCAPE-LEVEL MANAGEMENT IN THE CENTRAL HARDWOODS BCR".

This focus of the project is determining the scale (intensity and number of acres) of habitat management required to elicit population-level responses of bobwhites. Bobwhite management on several small (<200 acres) farms scattered throughout the landscape in piecemeal fashion may not produce measurable population-level responses; however, concentrating management efforts to a few well-defined focal landscapes may produce measurable responses. Two privately owned focal landscapes (>15,000 acres each) in north-central Arkansas (Central Hardwoods, BCR 24) will be managed to provide habitat for bobwhites by using early succession field borders around pastures and hay fields, prescribed burning and thinning of forested lands, and restoration of native warm season grasses. This research will assess the extent to which management guidelines specified in the NBCI will create a landscape that will increase productivity and population densities of bobwhites. Specifically, this research will determine 1) the collective response of bobwhite and songbird populations to landscape-level habitat manipulations and 2) determine practice-specific bobwhite use (nesting and brood rearing) of field borders, prescribed burned forests, and prescribed burned and thinned forests.

Data collection is nearing completion with a final report due by October. Initial data shows an increase in quail and songbird use in managed areas.

Florida Report
Southeast Quail Study Group
July 2008

Strategic Plan for Bobwhite Restoration in Florida

The Strategic Plan for Bobwhite Restoration in Florida was approved and endorsed by the agency's Commissioners in December 2007. We are now tasked with publishing and distributing a document that will target other land management agencies and non-government organizations that have land management responsibilities or influence land management decisions across Florida. In addition, we continue to refine through GIS analysis landscape scale opportunities (focal areas) across the state (public and private) where strategies can be implemented with a reasonable expectation to achieve successful restoration of habitat and birds. Through projects like the Upland Ecosystem Restoration Project (UERP), focal areas will be anchored by public ownership with landscape expansion to appropriate surrounding private lands. The Upland Ecosystem Restoration Project (UERP) reported on in the following section is one of the marquee projects designed as part of the focal area approach.

Associated with the roll-out of Florida's plan, the Florida Fish and Wildlife Conservation Commission (FWC) in cooperation with Tall Timbers Research Station provided training to 40 public land biologists from across the state. The workshop/seminar covered the basics of bobwhite management, population dynamics and ongoing research. We also demonstrated the potential management overlap between bobwhites and several other imperiled grassland birds.

In addition to UERP, there are three other significant quail projects under way. They include the South Florida Quail Project, the Babcock-Webb WMA study and a series of research projects being conducted by the University of Florida. A brief summary of all of these projects follows. ***Chuck McKelvy, FWC***

Upland Ecosystem Restoration Project (UERP)

The Upland Ecosystem Restoration Project (UERP) continues efforts to increase northern bobwhite populations on public land throughout Florida. Seven focal areas, representing approximately 65,000 acres have been identified for increased management activities. These areas include parts of: Apalachicola National Forest (4,000 acres), Ocala National Forest (9,000 acres), Myakka River State Park (12,000 acres), Volusia County's Lake George Forest and Wildlife Management Area (8,000 acres), Three Lakes Wildlife Management Area (15,000 acres), Jennings State Forest (5,500 acres) and Blackwater River State Forest (11,500 acres).

Through assistance with its many partners, UERP was successful in accomplishing approximately 35,000 acres of prescribed fire, 1,300 acres of roller chopping, timber

harvests on 600 acres of dense pine plantations and initiated species and habitat monitoring (covey call counts, vegetation surveys, line transects and breeding bird surveys). ***Greg Hagan, Tall Timbers Research Station***

Progress of South Florida Quail Project 2008

We are in the 5th year of the South Florida Quail Project. This project was designed to investigate many aspects of northern bobwhite ecology in peninsular Florida, home of the Florida Bobwhite (*Colinus virginianus floridanus*). Furthermore, we have investigated the ecology of grassland songbirds on flatwood and dry prairie habitats. We wrapped-up the grassland bird portion of the study when Adam Butler completed his thesis in fall 2007. We are now completing the manuscripts to be published in peer-reviewed journals. There will be a NRCS technical note published from this work as well.

We are in the final year of data collection for the project's first phase. Throughout the project we have conducted over 300 covey call surveys in an effort to create models to predict abundance of bobwhites as it relates to fine-scale and landscape scale variables. We have also radio-marked >350 individuals to monitor survival, reproduction, and dispersal as it relates to the season and scale of prescribed fire. Also, over 8,000 telemetry locations have been logged to quantify habitat selection of bobwhites in south Florida habitats.

The project thus far has been successful in stimulating interest in managing for bobwhites throughout BCR 31. We have consulted with dozens of landowners during our tenure. It has been challenging however to come up with ways to sustain management on private lands in the south Florida landscape.

We are very thankful to our supporters: the USDA-NRCS/MSU Bobwhite Restoration Project, the Escape Ranch, and the Florida Wildlife Foundation.
James A. Martin, Field Research Coordinator South Florida Quail Project, UGA/Tall Timbers Research Station

Babcock-Webb WMA Research Project: Managing the harvest of northern bobwhites on the Babcock-Webb Wildlife Management Area in southwest Florida.

A multi-year study of the bobwhite population on the Babcock-Webb WMA transitioned from a purely investigative phase to an adaptive management approach during 2007. Research results indicated that annual bobwhite survival rates were excessively low and that a major factor contributing to the low survival was harvest rate during the annual quail hunting season. Annual survival rates ranged from about 6% to 12%. Annual harvest rates (including crippling losses) ranged from 33% to 44% during the 6-week hunting season. From 2002 to 2006 hunting was conducted on 4 zones, 2 with limited access and 2 with unlimited access. Harvest rates were significantly higher and survival rates were lower on the zones with unlimited access. In 2007, hunting regulations were modified to establish a quota for the total quail hunt-days permitted on the WMA, and to balance the hunting pressure among the 4 hunt zones so that an approximately equal

number of hunt-days occurred on each zone. The quota was based on harvest/hunting pressure data from the previous 3 hunting seasons using the following 3 criteria: (l) the estimated mean pre-hunt population, (2) the mean number of hunt-days, and (3) the mean birds harvested per hunt-day including birds crippled but not retrieved. The objective was to reduce the harvest mortality rate from a 3-year mean of 42.8% to a maximum of 30%. This protocol required a reduction of hunt-days from a 3-year mean of 1168 (2004-06) to 848 (2007). The new regulation met with some resistance from hunters, but ultimately hunters who regularly used the area agreed to the experimental reduction in hunt-days.

The hunting regulation modifications yielded the following results:

(1) The harvest in 2007 was 1074 quail. This was a reduction of 41.7% from the 3-year mean (1843 quail: 2004-06), and a reduction of 36.6% from 2006 (1695 quail).
(2) The number of hunt-days was 876 in 2007. The desired number of hunt-days (848) was exceeded to allow access to all hunters who were at the check station by 0800 the last day of the hunt. Hunt-days in 2007 were 25.0% below the number for the 3-year mean (1168), and 22.5% below the previous (1130).
(3) The number of birds harvested per hunter-day was 1.23, a reduction of 21.7% from the 3-year mean (1.57) and 20.0% from 2006 (1.50).
(4) The harvest rate, including un-recovered cripples was 40.8% in 2007. This was marginally lower than the 3-year mean, but was 18.9% greater than the harvest rate in 2006 (34.3%). It was disappointingly higher than the desired harvest rate of 30%, particularly in light of the fact that the hunting pressure and harvest objectives met the projected estimates within acceptable limits.

Our post-hunt analysis indicated that the final results were seriously affected by a sharp decline in the pre-hunt bobwhite population. The projection for the 2007 harvest mortality rate was based on a projected pre-hunt population of 4442 birds. However, the 2007 post-hunt Lincoln-Peterson analysis indicated that there were only 2634 birds present at the beginning of the 2007 quail hunt, a decline of 40.7% from the 3-year mean. Thus, the most serious shortcoming of the current approach to managing the hunting mortality rate is the method for estimating the pre-hunt population. Had the actual 2007 population approximated the projected population, and had all other parameters remained constant, the 2007 hunting mortality rate would have been 24.2%.

Looking forward, the research effort will emphasize improving our estimate the pre-hunt bobwhite population. The fall covey count may have the most to offer in this respect. In 2006 a pilot study was accomplished on one unit of the WMA, and in 2007 the study was extended to include all units. This effort will be continued in 2008 and 2009, with the emphasis being to modify the technique to enhance its suitability specifically for the Babcock-Webb Wildlife Management Area. ***Ralph Dimmick, University of Florida, Coop Unit***

Ongoing Research Projects -University of Florida

Wildlife and habitat responses to prescribed burning, roller chopping, and grazing in Florida rangelands—At more than 100 locations on 40 south Florida ranches, we are examining avian (with an emphasis on quail) and invertebrate population and community, habitat, and forage responses to growing and dormant season prescribed burning, roller-chopping, and grazing. The study will run from 1/2006-12/2008 and is funded by FWC and UF/IFAS. (Emma Willcox, PhD student, and Mary Hobby, MS student)

Northern bobwhite restoration—We are restoring northern bobwhite habitat on ~2200 acres at the Devil's Garden Ranch/Alico, Inc., translocating wild quail in to the area, and examining habitat restoration techniques and the potential of translocating wild birds to establish or enhance bobwhite populations. The site will ultimately serve as a quail habitat and population demonstration area. The study began in 6/2006 and will continue for at least 3 years. Funding is being provided by Alico, Inc. and UF/IFAS. (Brandon Schad and Robert Hoffman, MS students)

Cattle producers and natural resource agencies in the Southeast: perspectives on wildlife management and conservation behaviors—We are conducting mail and internet surveys of more than 2000 ranchers and natural resource agency personnel from across the Southeast to understand their values, perceptions, and attitudes towards wildlife, private lands management and programs, and barriers to cooperation and program implementation on private lands. Farm Bill and other incentives programs are being emphasized. The project will run from 1/2006-12/2008 and is funded by UF/IFAS and USDA. (Adam Willcox, PhD student)

Quail Management Short Courses—Beginning in 2005, we have been conducting annual seminars and fields days on quail ecology and management for landowners, managers, hunters, and wildlife enthusiasts. These are conducted in cooperation with FWC, Tall Timbers, GA DNR, and GA Cooperative Extension. ***Bill Giuliano, University of Florida***

State of Georgia
Southeast Quail Study Group
2008 Annual Report

I. STATUS

The 1966-2006 USGS Breeding Bird Survey Data show bobwhite populations in Georgia declining at the rate of - 4.2 percent per year. Likewise, Georgia Department of Natural Resources, Wildlife Resources Division (WRD) surveys show both quail hunter numbers and estimated harvest have declined dramatically during this time. In 1966 an estimated 135,000 hunters harvested about 3.3 million quail while in the 2005 – 2006 season an estimated 22,850 hunters harvested 622,123 quail, of which 494,162 (79%) were pen reared and 127,961 (21%) were wild (note: 1966 and 2005 – 2006 estimates derived by different survey techniques). In general, quail populations are very low across the Ridge and Valley, Blue Ridge Mountains, Piedmont and Lower Coastal Plain physiographic provinces with populations in the Upper Coastal Plain varying from moderate to low with localized high density populations on properties being managed intensively for quail.

II. MANAGEMENT INITIATIVES

WRD Private Lands Program

Georgia WRD's Private Lands Program (PLP) includes the Bobwhite Quail Initiative (BQI), Forest Stewardship Program (FSP), Forestry Wildlife Partnership Program (FWP) and Farm Bill cooperative positions. The PLP is currently coordinated and delivered by: 1 program manager, 3 BQI biologists, 2 FSP biologists, 2 Farm Bill cooperative biologists, 1 administrative assistant and 1 secretary. The following provides a summary of accomplishments for bobwhites under each of these programmatic efforts.

Bobwhite Quail Initiative

For 2005-2007 there were 121 Bobwhite Quail Initiative (BQI) Cooperators, with 237 crop fields and 50 forest stands enrolled in the 15 county program area. In total, these Cooperators have established 288 miles of field borders, hedgerows, and filter strips and along with other BQI practices have positively impacted more than 13,889 acres for bobwhites, certain songbirds and various other wildlife. For the 15 BQI counties these habitat impacts represent only about 10% and 3% of the NBCI cropland and forestland goals, respectively. Farm Bill programs and practices are key even within the BQI counties for achieving NBCI restoration objectives. Additionally, BQI wildlife biologists provided technical guidance across 49,892 acres in 2007.

Based on 2007 summer monitoring (incidental observations during habitat compliance checks) bobwhite occurrence averaged 1.4 on BQI treatment fields and 0.08 on control fields. When compared to 2006, this represents 30% and 76% declines in bobwhite occurrence on treatment and controls, respectively. Summer drought is the suspected cause of the decline and appears to have impacted bobwhites less on BQI treatment fields than control fields. In addition to bobwhites, incidental observations of sparrow species, songbird species and rabbit species were over 200% higher on BQI treatment fields than controls (Table 1). Pooled across all years 2003 – 2007, bobwhite

occurrence averaged 1.9 (SE=0.14) for treatments and was significantly higher (ANOVA, F=19.1, df=1, P=0.00001) than the 0.6 (SE=0.13) detected for controls.

Table 1. Incidental sightings on BQI habitat treatment fields during Summer compliance checks 2003 - 2007

Year	Fields Sampled	Bobwhites Per Fld	Running Avg	Sparrows Per Fld	Songbirds Per Fld	Rabbits Per Fld	Cum. Wildlife
2003	253	2.4	2.4	NA	NA	NA	NA
2004	170	1.5	2.0	NA	NA	NA	NA
2005	93	2.3	2.1	0.5	2.4	0.2	5.4
2006	106	2.0	2.1	1.7	4.4	0.1	8.1
2007	122	1.4	1.9	2.2	4.6	0.1	8.3

Table 2. Incidental sightings on control fields during Summer 2003 - 2007

Year	Fields Sampled	Bobwhites Per Fld	Running Avg	Sparrows Per Fld	Songbirds Per Fld	Rabbits Per Fld	Cum. Wildlife
2003	39	1.3	1.3	NA	NA	NA	NA
2004	26	1.0	1.2	NA	NA	NA	NA
2005	30	0.4	0.9	0.0	0.1	0.0	0.5
2006	40	0.3	0.8	0.1	1.3	0.0	1.4
2007	37	0.1	0.6	1.1	2.8	0.1	3.7

As in past years, the 2007 - 2008 BQI Youth Quota Quail Hunts on volunteer BQI Cooperator farms were popular, successful and highly sought after. A total of 7 hunts were conducted with 14 youth participating, hunting for 38.5 hours, locating 6 coveys and harvesting 0 birds. Across all years the average covey find rate has been 1 covey per 2.5 hours of hunting (Table 3). However, it is important to note that these hunts are conducted regardless of weather conditions and hunters may choose to use their own dogs, which can vary greatly in quality. Many of the participating youth had never hunted wild quail before and these hunts have provided exciting, educational and memorable experiences. Many favorable comments and letters of appreciation have been received from both parents and youth.

Table 3. Summary of BQI Quota Youth Quail Hunts

Hunt Year	Number of Hunts	Number Youth Hunters	Total Hours Hunted	Coveys Found	Coveys Per Hour	Quail Harvested
2003-04	3	7	20	18	0.9	11
2004-05	8	15	51	21	0.4	2
2005-06	8	16	47	20	0.4	6
2006-07	4	6	26	7	0.3	7
2007-08	7	14	38.5	6	0.2	0
Total	30	58	182.5	72	0.4	26

During 2007 BQI biologists made substantial efforts at public outreach relative to bobwhite restoration. Through these efforts NBCI was promoted along with BQI.

Table 4. BQI Information Education Summary 2000 - 2007

Year	Programs & Present.	Field Day Present.	Total People	Professional Articles/Abs	Popular Articles/ Interviews	TV Spots Videos	Display Booth Man Days
2000	14	2	751	1	2	3	5
2001	6	8	888	1	4	4	10
2002	2	6	1,113	5	5	2	6
2003	17	22	2,738	2	8	4	8
2004	30	11	1,650	4	19	0	7
2005	19	1	961	0	8	0	2
2006	31	3	1,266	2	11	5	2
2007	45	9	2,616	0	10	1	9
Totals	164	62	11,983	15	67	19	49

The BQI automobile license plate, is one of three license plates currently issued by the Georgia Department of Motor Vehicles to generate funding for specific WRD programs. Two of the tags support Non-game and 1 provides funding for BQI. The first BQI plate originally was issued in December 2001 and the current plate issued in 2003. Both versions have featured similar scenes – a white-tailed deer with bobwhites taking flight. The license plate sells for $25.00 and WRD receives $22.00 per plate. During 2007 BQI license plate revenue was $605,022.

BQI continues to show that bobwhites can be increased on working farm and forestlands. The key ingredients are suitable landscape, adequate funding for landowner incentives and dedicated technical staff for program delivery.

Bobwhite Technical Team

The WRD formed the Georgia Bobwhite Technical Team (a 12 member multi-organizational task force of state, federal and private partners) in 2003 to work collaboratively with the implementation of state, private and federal programs to achieve NBCI goals and objectives in Georgia. In December 2005 these organizations signed a Memorandum of Agreement pledging support of NBCI and assistance as feasible with implementing NBCI in Georgia. An important step was taken in 2007 with the formation of the first Georgia NBCI Habitat Cooperative in Floyd County, Northwest Georgia. The WRD, Natural Resources Conservation Service (NRCS), Farm Service Agency (FSA), and Georgia Forestry Commission (GFC) collaboratively hosted two public meetings. A field day was conducted on one of the Coop farms in April 2008 with approximately 40 landowners attending. Currently, the Coop has 4 landowners with a total of 1,900 acres enrolled.

Bobwhite Translocation Policy

In order to expedite bobwhite population recovery across newly renovated habitats WRD developed a formal bobwhite translocation policy in 2006. This policy permits the movement of wild quail by a WRD authorized agent from properties with high-density (>1bird/2acres) bobwhite populations to properties with low-density (<1bird/5acres). Translocation permits are for three years and allow movement of 50 pair per 1,000 acres. Recipient properties must be at least 1,500 acres of contiguous high quality habitat; baseline and post treatment fall covey count monitoring are required; and the release of pen reared quail and quail hunting are prohibited during the translocation period. Currently, two properties have qualified. Population recovery on one property was achieved 1-year post release and did not require additional translocations.

(Submitted by Reggie Thackston, WRD PLP Manager)

Forest Stewardship, Farm Bill, Forestry For Wildlife Partnership and USFWS Partners Programs

Forest Stewardship Program

Two FSP biologists reviewed 188 plans representing 54,157 acres; co-wrote 27 plans representing 14,255 acres; and wrote 2 plans representing 126 acres. Many other landowners were provided advice, information, follow-up site visits, and/or were nominated as FSP Certified Stewards. "Wildlife" was within the top 2 of 5 objectives for most of these landowners.

Conservation Reserve Program

Forty-two percent of Georgia's 327,212 CRP acres occur within the Longleaf National Conservation Priority Area. About 62,039 acres have been enrolled in the new continuous Longleaf Pine Forest Initiative (CP36). Georgia has enrolled 2,136 acres of field borders of the allotted 5,600 acres (CP 33). Spring and fall monitoring is being conducted on ## points across ## counties. A CRP SAFE (CP38) proposal was approved for enhancing expiring CP 11, CP3, CP3A pine stands through thinning, burning, exotic grass control and planting of a nwsg/forb mix. CRP provides $12.7 million annually to Georgia participants.

Environmental Quality Incentives Program

In 2006 PLP worked with NRCS to create the Sustainable Forest & Wildlife Management EQIP. This practice allows landowners to choose two forest management intensity levels for wildlife & timber, of which one favors bobwhites through heavy thinning and frequent prescribed fire over a 10-year period. Public demand has exceeded funding capability and this past year a total of $743,000 was allocated for thinning (6,730 acres), prescribe burning (15,720 acres), seeding log roads (712 acres) and exotic plant species control & pest management (2,904 acres).

Wildlife Habitat Incentives Program

As with EQIP demand has exceeded funding capability. A total of $733,000 funded prescribe burning longleaf pine & hardwood (5,541 acres), timber stand improvement (631 acres), exotic plant species control & pest management (2,189 acres), hedgerow (12,235 linear ft with a minimum width of 30 feet), upland wildlife habitat (751 acres), and longleaf and hardwood tree planting (1,896 acres).

Native Warm Season Grasses (NWSG) Demonstration Project

To demonstrate NWSG establishment techniques and potential benefits for wildlife, NRCS supports the Northern Bobwhite Conservation Initiative's grant to establish demonstration areas in Georgia's Floyd, Wilkes and Thomas Counties, totaling 66 acres. The purpose is to demonstrate establishment techniques and potential benefits for wildlife.

Forestry for Wildlife Partnership Program

Georgia Power, Plum Creek and Temple-Inland received awards for participating in this voluntary annual program that promotes blending wildlife conservation into corporate forestry practices. Together they improved 1.2 million acres for wildlife.

Partners for Fish and Wildlife Program

575 acres of longleaf pine within associated native ground cover, as well as 50 acres of native warm season grasses within depleted native seedbank areas were restored.

(Submitted by Eric Darracq, PLP Sr. Wildlife Biologist)

WRD DiLane Wildlife Management Area Bobwhite Restoration

In 2001 WRD began intensive bobwhite habitat restoration on Di-Lane Wildlife Management Area. Restoration efforts across approximately 5,000 acres included heavy thinning of pine and hardwoods, fallow field management, food plots and herbicide control of invading hardwoods and exotic grasses. In order to monitor the results of these and future management actions a fall covey count along with a predator index survey was initiated. Surveys were conducted through a collaborative effort between WRD associates, wildlife program students from Ogeechee Technical College, the Albany Quail Project, and Tall Timbers Research Station.

Fall covey counts were conducted using a total of 23 listening stations. Eighteen points were surveyed on October 31, 2007 and all 23 points were surveyed on both November 6 and November 7, 2007. One point was surveyed on November 9, 2007. Surveys resulted in detection of 49 coveys. At least 1 covey was detected at all but one of the 23 listening stations with as many as 3 coveys detected at 6 stations. Immediately following the point counts, bird dogs were used to locate and flush a sample of coveys to estimate covey size. Seven coveys were flushed that averaged 9.2 quail/covey. Using the Tall Timbers Research Station covey call survey formula, the final tally for the 4,462 acres surveyed was 94 coveys, yielding an estimated 2.10-coveys/100 acres surveyed. This covey estimate represented a 17% decrease when compared to the 2006 survey.

Mesomammalian predators were surveyed using 25 scent stations distributed about 500 m apart along roads and firebreaks. These were monitored for 5 consecutive nights during November 14–18, 2007. Results indicated a very high visitation index of .38 (excluding coyotes). Foxes, raccoons, opossums, and skunks were the most frequent, in that order.

Future surveys will be used to monitor bobwhite and furbearer populations' response to management to facilitate an adaptive management process.

(Submitted by I.B. Parnell, WRD Sr. Wildlife Biologist)

III. REASEARCH UPDATES

Albany Quail Project

This summer marks the 16th consecutive year of fieldwork by Auburn University's School of Forestry and Wildlife Sciences on Quail Plantations in southwest Georgia. This cooperative effort has taken a unique adaptive resource management approach where research results have immediately been applied in the field with results measured by quail density and hunting success. Many aspects of quail ecology, management, and hunting have been studied during this time with radio-transmitters placed on nearly 9,000 wild quail. This science-based approach to management has resulted in quail populations and hunting success at or near record levels on many of the Albany area Plantations over the last decade.

Current research work includes the data analysis and publication preparation phase of the 7-year predation management project in conjunction with UGA, TTRS, and GA USDA-WS. We are also finishing up Theron Terhune's PhD project on relocation of wild quail in Georgia, which has resulted in several more projects around the southeast to create new population centers of wild quail by restocking. We are currently conducting an experiment in Alabama where we are relocating wild quail onto a property that has traditionally released birds in an attempt to establish a wild population there. We also have two ongoing satellite projects where radio-tagged birds are being monitored year round to develop specific management strategies; one in Alabama and one in east Georgia. We have an MS student in Alabama focusing on brood habitat management in these unique soil types while the east Georgia project is focusing on ways to offset heavy loss from Cooper's hawks during some winters.

Our field staff continues to be active in providing management advice on existing Plantation properties as well as with several large-scale projects to develop new quail properties in Georgia, South Carolina, and Alabama. Much of this year is being spent on coordinating the transition of the Albany Quail Project from Auburn University to being part of the game bird program at Tall Timbers Research Station. This transition will be complete by January 2008. (*Submitted by Clay Sisson, AQP Coordinator)*

University of Georgia

We are continuing our work on a number of projects. We completed fieldwork on the long-term predation management project being undertaken with Tall Timbers Research Station and Auburn University. We expect to have the main publication on the experiment submitted this summer. Several students are investigating several avenues of research related to this project using the extensive nest video collection we developed. In particular, Joe Burnam is completing his thesis on nest attendance and incubation patterns. In addition, he is investigating nest predation events and behavioral interactions between hens and predators. Susan Ellis-Felege is using the main data from the experiment to develop models on predation risk. Bobwhite genetics research continues with Brant Faircloth completing his Ph.D. on relatedness and social interactions. His dissertation chapters are being sent out for publication review. Brant is now a post-doc at UCLA. Soo Hyung Eo will be completing his Ph.D. on population genetics of bobwhites

and other *Colinus* using both nuclear and mitochondrial techniques. Theron Terhune has completed his field and lab work investigating both biological and genetic issues relative to translocation of wild bobwhites. This was done in collaboration with Auburn University. Theron has recently accepted a post-doc at TTRS. James Martin continues his Ph.D. fieldwork in collaboration with TTRS on rangeland management and bobwhites in Florida. Randy Cass is writing his thesis on behavior and survival in captive reared bobwhites released to the wild.

(Submitted by Dr. John Carroll, Warnell School of Forestry and Natural Resources)

(updated 06/02/08)

Indiana Bobwhite Quail Status Report 2008

Southeast Quail Study Group Meeting
Lafayette, LA ? July 15-18, 2008

INDIANA DIVISION OF FISH & WILDLIFE

INTRODUCTION

This Indiana Quail Status Report is a compilation of ongoing management and research efforts related to the enhancement of habitats for northern bobwhite quail and the monitoring of their population status throughout the state. The bobwhite quail is no longer the most popular game bird in the state of Indiana, yet Indiana quail hunters tend to be one of the more vocal hunting constituencies.

Research Staff – N. Budd Veverka came on to fill the Farmland Game Research Biologist position in December of 2007, and will serve as the Quail Project Leader. Prior to filling of the Farmland Biologist position, the quail project responsibilities were being covered by Steve Backs and Gary Langell. Gary Langell, Private Lands Program Manager, will continue to oversee all private land and farm bill habitat initiatives related to bobwhite quail, including the quail habitat priority areas.

STATUS

Population Surveys -Whistle Counts

Road-side counts of whistling bobwhites are conducted each spring to monitor changes in the northern bobwhite population abundance. These counts have been conducted annually since 1947 with a lapse from 1958 to 1976. At the time of this report, the 2008 bobwhite whistle count had not been conducted. I have thus included the 2007 data to show our past trends.

In 2007, a total of 80 routes were surveyed in 77 counties between 6 June and 30 June. Observers recorded the number of quail heard whistling during 3 minute periods at 15 different stops along each 15-mile route. During 2006 and 2007, bobwhites were heard on 63 of these routes and data from only these routes were used to draw statistical comparisons between indices of bobwhite abundance. Statewide, the number of bobwhites heard per stop in 2007 ($\bar{x}$ = 0.79 ± 0.09) was less than the number heard per stop in 2006 ($\bar{x}$ = 0.87 ± 0.09), but this difference was

Region	n^a	Mean Bobwhites Heard Per Survey Stop 2006	2007	% Change	*P*
Statewide	63	0.87 ± 0.09	0.79 ± 0.09	-9.2%	0.13
North	9	0.74 ± 0.25	0.66 ± 0.18	-11.0%	0.7
Central	24	0.68 ± 0.10	0.44 ± 0.10	-35.5%	0.01
Southcentral	13	0.76 ± 0.16	0.87 ± 0.22	13.6%	0.35
Southeast-west	17	1.28 ± 0.21	1.29 ± 0.18	0.6%	0.95

[a] Includes only those routes surveyed in 2006 and 2007 along wihich at least 1 bird was heard (paired non-zero routes).

Table 1. Bobwhite quail whistle count results for 2006 and 2007.

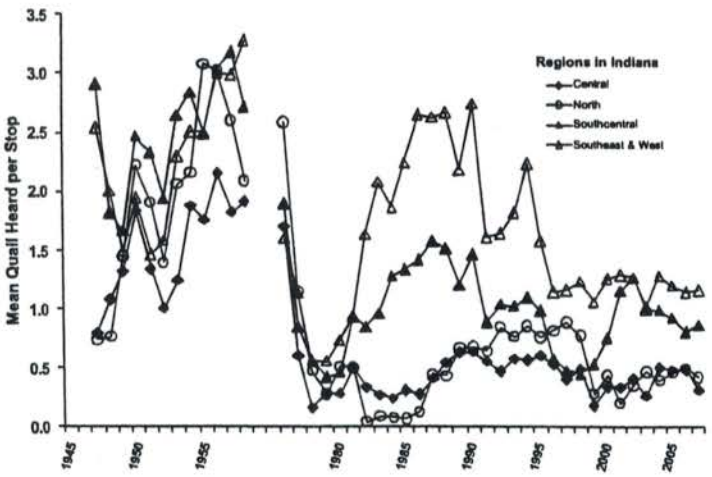


Figure 1. Mean number of northern bobwhite heard at each survey stop within Indiana's 4 bobwhite management regions, 1947-2007.

not significant (Table 1). Additionally, the number of bobwhites heard per stop in 2007 did not differ ($P > 0.10$) from the number heard in 2006 within 3 of the 4 physiographic regions of the state (Table 1). The central region declined -35.5% ($P = 0.00$).

Despite the similarities between the 2006 and 2007 statewide breeding populations, and some improvement in the southern regions of the state, Indiana's primary quail range, long-term trend data continues to show that the northern bobwhite population remains well below numbers observed in past decades (Figure 1) in all 4 of Indiana's physiographic-quail survey management regions (Figure 2).

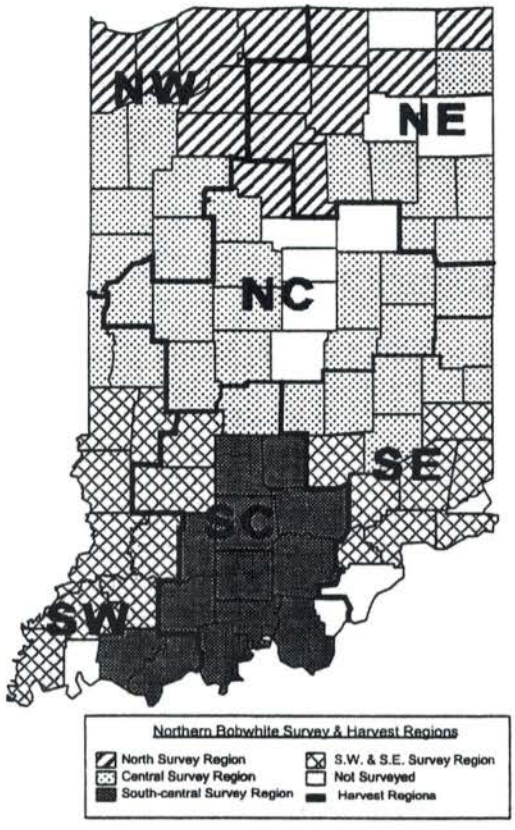


Figure 2. Bobwhite Quail Management Regions. Harvest Regions are denoted by abbreviations (NW, NE, NC, SW, SE, SC).

Harvests -Small Game Harvest Survey

A small game harvest survey was last conducted in 2006. This survey of Indiana small game hunters was conducted following the 2005–2006 hunting season to determine harvest and hunter participation. Estimates derived from this survey were quantitatively compared to estimates from the previous small game harvest survey (2003-2004). A total of 176,674 people held a legal hunting license during the 2005–2006 season; down 12.1% from 201,005 license holders during the 2003–2004 season. Following the 2003–2004 season, questionnaires were delivered to 12,991 license holders and returned by 3,390 (26.1%). According to the survey data, the number of people that actually hunted =1 small game species was 121,022, down 18.9% from 149,336 during the 2003–2004 season.

An estimated 11.4% of license holders and 16.0% of hunters pursued northern bobwhite in Indiana during the 2005–2006 season. These participation rates resulted in a statewide estimate of 19,700 hunters and a harvest estimate of 28,304 northern bobwhites during the 2005–2006 season. In comparison to 2003–2004, the number of northern bobwhite hunters in Indiana decreased 28.1% with a decline in the harvest of 50.3%. The southwest harvest region of the state (Figure 2) had the greatest number of quail hunters (5,003). The northern bobwhite harvest was also greatest (11,274) in the southwest region, yet quail hunters in the south-central region (Figure 2) had the greatest success, averaging 0.74 northern bobwhites per day of hunting effort. The least successful quail hunters were those pursuing quail in the northeast harvest region (Figure 2), averaging only 0.19 northern bobwhites per day of hunting effort. The average northern bobwhite hunter in Indiana spent 2.84 days in the field (-12.0% from 2003-2004) and

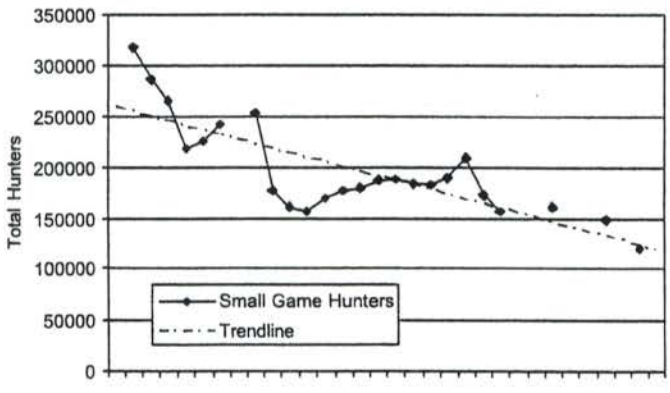


Figure 3. Estimated number of small game hunters (pursued = 1 small game species) in Indiana, 1976–2005.

harvested 1.44 bobwhites (-30.9% from 2003–2004) during the 2005–2006 season. In general, all of the parameters associated with bobwhite hunting in Indiana have decreased from the 2003-2004 season, leading to the highest overall decline in total estimated harvest of any species during the 2005-2006 season.

The harvest is directly related to the number of hunters, and a long-term decline in small game hunters (Figure 3) has resulted in record or near-record lows in the number of hunters and the associated harvests of northern bobwhite (Figure 4), as well as most other small game species in Indiana. Thus, the harvest per effort index is a better indicator of population abundance than the estimated harvest. The harvest per effort index for northern bobwhite was substantially lower during the 2005-2006 season than during the 2003–2004 season(Figure 5), indicative of actual population declines. However, over the past twenty odd years, the harvest per effort for northern bobwhite in Indiana has exhibited an improving trend(Figure 5).

Even though some small gains have been seen of the past couple decades, northern bobwhite populations in Indiana remain extremely low, and habitat loss or lack of quality habitat appears to be the driving force, and may actually become worse in coming years. The loss of CRP land over the next few years will likely have a detrimental effect on northern bobwhites and other small game species in Indiana. We must create and maintain suitable habitat for all small game species and continue to manage the harvest in the best interest of the species. Without these efforts, small game populations will continue to decline.

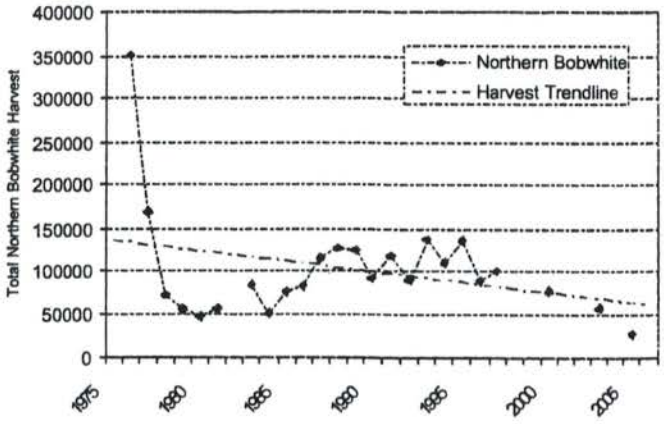


Figure 4. Estimated annual harvest of northern bobwhite in Indiana, 1976–2005.

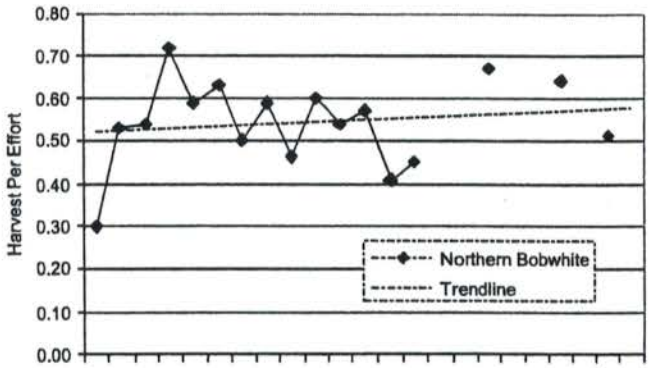


Figure 5. Estimated harvest per day of effort for northern bobwhite in Indiana, 1984–2005.

PRIVATE LAND AND FARM BILL HABITAT PROGRAMS

Mission

The mission of the IDNR, Division of Fish and Wildlife is to professionally manage Indiana's fish and wildlife resources for present and future generations, balancing ecological, recreational, and economic benefits. Indiana's Private Lands Program is the Division's mechanism for applying this mission to the vast majority (96%) of Indiana's landscape that is in private ownership. This is accomplished through 4 primary areas of responsibility: technical assistance, financial assistance, public information/education, and wildlife conflict

resolution.

Infrastructure

Private Lands Staff – The Private Lands Unit consists of 15 Private Lands Biologists, responsible for districts containing from 5 to 9 counties, and an Urban Wildlife Biologist. Overseeing these positions are 2 Regional Private Lands Supervisors and the Private Lands Program Manager. The Private Lands Program Manager oversees the development, coordination, implementation, and evaluation of the Division's Private Lands Program and serves as the Division's liaison with other IDNR divisions, state and federal agencies, and private conservation organizations that directly impact natural resources management on private lands.

National Bobwhite Conservation Initiative

In 2004, the Private Lands Unit stepped down the habitat objectives specified in the National Bobwhite Conservation Initiative to specific county level objectives. These county level objectives were then combined to develop district level objectives that were incorporated into each private lands biologist's annual work plans. Each biologist has a specific CRP fescue conversion, CRP mid-contract management, non-CRP fescue conversion, and brood-cover/idle nesting cover habitat development objective for increasing bobwhite quail and pheasant populations.

In order to have a greater impact on these populations, the Private Lands Unit decided to focus our efforts into priority areas. A total of 6 Pheasant Habitat Priority Areas were developed in northern Indiana and 7 Quail Habitat Priority Areas were developed in southern Indiana (Figure 6). Priority areas were selected based on Habitat Suitability Index (HSI) models for bobwhite quail prepared by Mississippi State University, areas of known quail/pheasant populations, interspersion of habitat types, and the potential for results. CRP enrollment incentives, CRP Mid-Contract Management incentives, and increased caps for use of Wildlife Habitat Cost-Share funds and Game Bird Habitat Development Funds were provided in the priority areas to encourage landowner participation. Landowners in priority areas also receive additional points in the USDA WHIP ranking process.

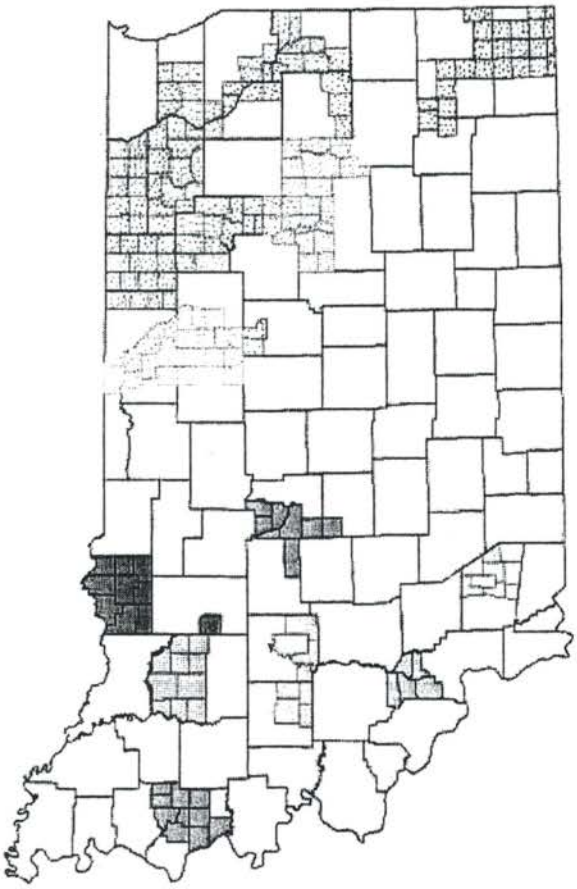


Figure 6. IDFW established 6 Pheasant Habitat Priority Areas in northern Indiana and 7 Quail Habitat Priority Areas in southern Indiana. The map shows the Habitat Priority Areas for 2007-2008.

Beginning in 2006, the Division began CP33 monitoring according to the protocol established by Mississippi State University. A total of 41 pairs of CP33 buffers/control fields were monitored during June using the point count protocol for songbirds and quail. The same pairs were also monitored in October using the covey

call protocol. The monitoring protocol will be repeated again this year. As of June 6, 2008 a total of 10,473 acres have been enrolled in CP33 in Indiana.

SAFE (State Acres For Wildlife Enhancement)

Indiana's SAFE program consists of Northern Bobwhite; Henslow's Sparrow; Grasshopper Sparrow/Sedge Wren; and Indiana Bat priority areas. The primary conservation practices that participants may enroll in include; permanent short stature native grasses, permanent wildlife habitat - consisting of blocks or strips of short stature native grasses/forbs and introduced grasses/legumes in equal amounts; rare and declining prairie; rare and declining sedge meadow, wetland restoration (floodplain and non-floodplain) and hardwood tree planting. Indiana began its SAFE Enrollment on May 12, 2008. Indiana was allocated 13,100 acres. As of June 6, 2008 a total of 2,413 acres had been enrolled.

Fescue Conversion through Tier 1 LIP Grant

Beginning in the fall of 2007, Indiana began implementation of a Tier 1 LIP grant directed at reducing fescue and smooth brome monocultures. The program reimburses private landowners 75% of the cost for converting fescue or smooth brome to wildlife friendly grasses, legumes and forbs. To date, a total of $30,000 (approximately one-half of our 2-year allocation) in LIP cost-share has been obligated to fescue/brome conversion projects.

Wheat Stubble Pilot Program

Due to the increased planting of winter wheat this past fall, the Division has began a pilot cost-share project in northwestern Indiana to pay wheat producers to not disturb winter wheat stubble once the grain and straw have been harvested. Throughout most of Indiana, winter wheat is double-cropped to soybeans. Lower annual precipitation rates in northwestern Indiana, however, typically prevent attempts to double-crop. Unfortunately, it is common practice for producers to spray the stubble to control weed growth and then disc it under in the fall. The program's objective is to pay producers not to spray or disturb the stubble in any manner until March of the following year to encourage weed growth and provide brood-rearing, roosting, and winter cover that typically would not be available. We will report on the success of this project next year.

CURRENT NORTHERN BOBWHITE RESEARCH

Beginning this winter, the IDFW Research Unit will begin a radio-telemetry project to examine the impacts of summertime dog training on northern bobwhite productivity and dispersal at Indiana fish and wildlife areas. Not only will the data from this project answer needed questions related to the regulation of dog training on our fish and wildlife areas, but will be the first project in Indiana to use radio telemetry to examine nesting, productivity, dispersal, and habitat use by northern bobwhites.

Other research will include a re-evaluation of current whistle count routes, examining changes in abundance within quail priority areas, and using GIS to examine habitat changes across Indiana's northern bobwhite range, specifically in regards to the quail habitat priority areas and Farm Bill programs.

Report compiled by:

N. Budd Veverka, Farmland Game Research Biologist, Indiana Division of Fish and Wildlife, 553 E. Miller Dr., Bloomington, IN 47401. TX: 812-334-1137; bveverka@dnr.in.gov

Gary Langell, Private Lands Program Manager, Indiana Division of Fish and Wildlife, 553 E. Miller Dr., Bloomington, IN 47401. TX: 812-334-1137; glangell@dnr.in.gov

Iowa
Population and Status Report 2008

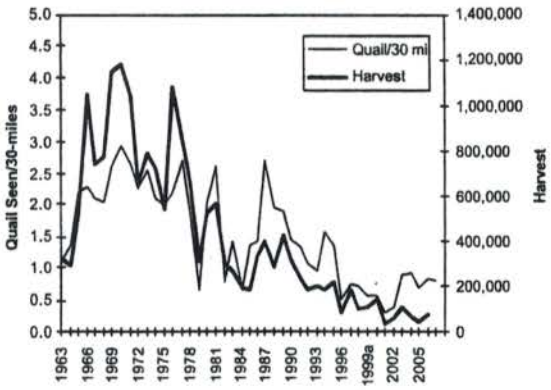
Todd R. Bogenschutz, Upland Wildlife Biologist

Southeast Quail Study Group
July 15-18, 2008
Lafayette, LA

Hunting regulations:
Small game hunters are required to have a valid small game hunting license, habitat stamp and hunter safety certificate if born after January 1, 1972 to hunt small game in Iowa. Resident hunting license cost $17.50 and habitat stamp $11.50. Non-resident (+18) small game hunting license are $80.50 plus $11.50 habitat stamp. Non-resident small game licenses (under 18) are $30.50. Hunting licenses are valid until January 10th of each year. No limited season licenses are available. Hunter orange is required to hunt upland game birds. The Iowa DNR does not have a hunter access program.

Species	Season dates	Limits Bag/Poss.	Shooting hours
Pheasant	Last Saturday in October - January 10th	3/12	8:00-4:30
Quail	Last Saturday in October - January 31st	8/16	8:00-4:30
Gray Partridge	2nd Saturday in October – January 31st	8/16	8:00-4:30
Cottontail	September 1st - February 28th	10/20	Sunrise-sunset

Hunters and harvest:
A random survey of licensed hunters was conducted following the 2007 small game season to determine the size and distribution of Iowa's small game harvest. Survey participants returned 3,416 usable questionnaires for a response rate of 42%. Based on these returns Iowa had 238,033 licensed hunters in 2007-08 and of these 121,105 indicated they hunted small game, a -10% decrease from 2006. Pheasant were the most commonly reported species hunted by small game hunters (90%), while cottontails where the second most sought after species at 26% of small game hunters. Approximately 18,234 quail hunters (8% of licensed hunters, 15% of small game hunters) harvested 54,444 quail during the 2007 quail season. Hunter numbers declined -19% and harvest declined -28% compared to 2006 estimates. Hunter numbers are a new all time low for Iowa, while this past year's harvest was the 3 lowest ever recorded. Quail hunters averaged 7 days a field and harvested 3 birds for the season. Forty-nine percent of the quail harvest occurred in the first 9 days of the 2007 season. Over 90% percent of quail hunters hunted 15 days or less and over 50% hunted 4 days or less. Resident quail hunters accounted for 79% of the total quail harvest.



Populations and survey methodology:
The Iowa DNR uses an August roadside survey (ARS) to assess its upland game populations. The ARS generates data from 210 30-mile routes on ring-necked pheasants, bobwhite quail, gray partridge, cottontail rabbits, and white-tailed jackrabbits. Counts conducted on cool mornings when the sun is shining, with heavy dew, and no wind yield the most consistent results. All routes are conducted on gravel roads to minimize vehicle traffic. The 2007 results are available on the DNR's website at *WWW.IOWADNR.COM.*

Habitat trends:
CP33 - Iowa enrolled all 20,000 acres of CP33 allocated to her and has received an additional allocation of 5,000 acres of which all of 1,800 acres is enrolled. Iowa is assisting in the national monitoring effort for CP33, following the guidelines developed by the SEQSG. A summary of the Iowa's CP33 monitoring is shown in the table below.

Results from 2006 CP33 monitoring in Iowa. Average birds heard and average number of different species heard at trmt and ctrl sites (40 sites ea).

	CP33 Treatment	Control (no buffer)	Percent Difference
Birds Heard (all)	9.1	6.6	38%
Species Heard	5.1	3.9	31%

Current research:

Iowa has 2 ongoing quail research projects. The first is a study of the landscape features influencing the decline of bobwhite quail in Iowa. Historical aerial photos (1940's, 1960's, and 1980's) from 45 counties in Iowa's primary quail range have been classified and digitized. This fall a graduate student at Iowa State Univ. will begin the process of summarizing changes in macro landscape variables using ArcGIS and spatial software. The second project is a study entitled "Nest success and brood habitat selection of the northern bobwhite in relation to microhabitat and landscape composition on managed and unmanaged landscapes in Southeast Iowa" first draft of this manuscript is in review for submission to JWM. We saw better nest success on the managed area verses the unmanaged area, however we could not relate nest success to any particular management activity. Several vegetation characteristics were predictive of nest success or failure.

Special projects:

Pheasant/Quail Restoration Program - The 2002 Iowa legislature passed HF2591 which raised resident hunting license fees $4.50 beginning July 1, 2002. HF2591 directed the DNR to spend 60% of the funds per year from this license increase to restore declining pheasant and quail populations, particularly populations in southern Iowa. Practices the DNR paid for on private CRP land included: foodplots, strip-disking and/or spraying, establishment of warm season grasses, interseeding, edge feathering, and burning. The DNR paid the full cost of establishing habitats on private CRP lands and require a 5-year habitat agreement from participating landowners.

One of the purposes of HF 2591 was to demonstrate that pheasant and quail populations could be improved on private farmland with habitat restoration activities, especially on private farms in southern Iowa. The DNR made a concerted effort to evaluate habitat improvements and pheasant/quail population response in the four county Focus Area in southern Iowa. In the Focus Area DNR staff worked with 66-126 private landowners over a five year period to improve habitat on 2,259-3,375 acres of private CRP. Number of cock pheasants heard crowing at stops on managed farms from 2004-07 averaged 6.7 crows/stop verses 1.7 crows/stop on unmanaged farms, 4X higher (Table 1). Number of male bobwhite heard calling on managed farms averaged 2.9 males/stop verses 0.3 males calling/stop on unmanaged farms, 10X higher (Table 1).

In the summer of 2007 the DNR surveyed 115 landowners who participated in the Pheasant/Quail program within the Focus Area to gauge their opinion of the program and if bird populations were higher after habitat work was complete. The majority (92%) of individuals participated in the program to provide habitat for pheasants and quail. Respondents generally indicated that pheasant (76%) and quail (67%) numbers, as well as numbers of songbirds, deer, turkey, and rabbits had increased by the end of the program. Most respondents reported observing noticeable changes in pheasant and quail numbers by the 3rd year of participation.

Figure 1. Habitat accomplishments, expenditures, and wildlife counts from Pheasant and Quail Restoration Program.

Focus Area Summary (Clarke, Decatur, Lucas, and Wayne counties)

	2003	2004	2005	2006	2007
Landowners Participating	66	89	120	126	110
CRP Treated (ac)[a]	2,259	3,309	3,375	2,532	2,652
Dollars Expended	$183,271	$176,921	$155,090	$178,382	$179,879
CRP Improved (ac)	5,000	8,000	14,400	14,760	12,870
Wildlife Survey Call Counts					
Pheasants Heard (Trmt/Ctrl)[b]	na[c]	7.5/1.0	6.2/2.0	6.7/1.9	6.4/2.0
Quail Heard (Trmt/Ctrl)	na[c]	3.4/0.3	3.6/0.2	2.1/0.2	2.3/0.3

Non Focus Area Summary

	2003	2004[d]	2005	2006	2007
Counties Involved			26	38	52
Landowners Participating	55		65	91	113
CRP Treated (ac)[e]	1,079		2,181	2,969	4,924
Dollars Expended	$ 90,081		$114,497	$151,184	$269,296
DNR Shelterbelt Program	$ 29,503	$ 16,332	$ 14,326	$ 10,412	$ 18,850
Pheasants Forever Agreement[f]	$100,000	$100,000	$100,000		
Total Dollars	$502,855	$393,253	$483,913	$339,978	$468,025

a Figure does not include 11 linear miles of edge feathering completed over the 5 yr period

b Average birds heard calling per stop.

c Call counts were not conducted the first year.

d No dollars available due to budget restraints.

e Figure does not include 7 linear miles of edge feathering completed between 2005-07.

f Pheasants Forever agreement terminated after 2005.

The purpose of the pheasant and quail restoration program was to demonstrate that pheasant and quail numbers could be improved in southern Iowa. Clearly within the Focus Area habitat improvements did increase pheasant and quail numbers on participate farms, as documented by DNR surveys and landowner comments. However, from a landscape perspective DNR roadside counts, in the 4 county Focus Area showed a steady decline in observed bird numbers from 2003 thru 2007. This should not be unexpected as the four county Focus Area contains over 217 mi^2 of CRP, and DNR funds were only able to improve habitat on about 5 mi^2 at 100% cost share. This comprises only 2% of available CRP in the 4 county Focus Area. It cost the DNR $40,800 for each square mile of habitat improvement ($64/ac). To improve the habitat on all 217 mi^2 in the four county Focus Area would cost almost $9M dollars at 100% cost-share.

Prepared by Jim Pitman
Small Game Coordinator
Kansas Department of Wildlife and Parks
1830 Merchant, PO Box 1525
Emporia, KS 66801
Office: 620-342-0658
Fax: 620-342-6248
E-mail: jimp@wp.state.ks.us

Kansas Bobwhite Status Report
Southeast Quail Study Group Meeting
Lafayette, Louisiana
July 15-18, 2008

In Kansas, bobwhite populations are monitored within 6 management regions (Figure 1). This report provides a brief description of bobwhite population trends in Kansas over the last 30+ years. At the time of this report most of the 2008 surveys conducted by the Kansas Department of Wildlife & Parks (KDWP) had not yet been completed or analyzed. Thus, data from 2007 is the most recent information for many of the indices presented in this report. This report also contains a short update on KDWP's private land programs and farm bill activities.

Production

The KDWP gauges production of bobwhites using a young:adult index derived from the July rural mail carrier survey (RMCS) and from a departmental August roadside survey. The statewide 2007 young:adult ratio was 30.6% below the long-term average from the previous 25 year period (Figrure 2). Production was the worst in the southeast and southcentral portions of the state. The young:adult ratios in the Southeast, Flint Hills, and Southcentral management regions were 45-60% below the long-term averages and among the worst indices recorded in the 27 years that data have been collected. Portions of those management regions were hit with torrential rain and flooding during the last week of June coinciding with the peak bobwhite hatching period. Some areas received >15" of rain in less than 48 hours. Production in the northcentral management region was also poor during 2007 and ~30% below the long-term average. Much of the northcentral management region was also hit with torrential rain and flooding but that area was hit earlier in the season (May) so the impact on quail productivity wasn't quite as severe. Production was near average in the northeast management region and

above average in western Kansas (Figure 3). Weather conditions in these regions more closely approximated average conditions. By backdating broods observed during the August roadside count a frequency distribution was created to illustrate the time when Kansas bobwhite nests hatched during 2007 (Figure 4). The peak hatching period was estimated to be the last 10 days in June and first 10 days in July. The peak of hatch in 2007 was skewed about 10 days later than normal. This was likely due to few early nests hatching as a result of heavy rain and flooding during early June in many parts of the state. The mean brood size during the 2008 observation period was 8.6 which was <10% below the previous 20 year mean of 9.3. The number of broods observed across the state during the survey period was less than half of the number seen the previous year.

This report was written prior to the peak hatching period for 2008 so no data were available to predict the quality of this year's hatch. However, most of the state got substantial amounts of moisture during the spring and nesting conditions appeared to be quite good. Barring another unforeseen weather catastrophe it is likely that per capita production during 2008 will be much improved from the previous year.

Population Trends

The KDWP uses 3 indices to track long-term trends in bobwhite abundance across the state. The RMCS provides the longest dataset and has been run since 1962. The RMCS is conducted during 4 separate observation periods (i.e., January, April, July, and October) and >500 mail carriers currently participate in this voluntary effort. The data they collect are standardized into an index of observations per 100 miles driven. Because the 4 separate indices are highly correlated ($r > 0.85$) only the April RMCS index will be discussed in this report. The April RMCS index shows a long-term decline of northern bobwhites in Kansas at the rate of

4.5% per year since 1962 (Figure 5). The other 2 methods utilized by the KDWP to track bobwhite abundance are hunter harvest estimates and the recently initiated whistle count survey (started in 1998). Both of these indices reveal a similar declining trend on a statewide scale. It is not known how these indices are related to bobwhite densities but all 3 are highly correlated indicating that they are measuring the same response (Figure 5).

The indices to bobwhite abundance have declined in every region of the state since 1962 but have been the most severe in the eastern management regions (Figure 6). These regions have been the most effected by natural succession, woody encroachment into grasslands, conversion of native grassland to tall fescue, and annual burning associated with early intensive stocking of livestock. These land use changes have either not occurred in central and western Kansas or have been much less severe. In fact, bobwhite habitat in far western Kansas has actually increased in recent years as a result of irrigated cropland being converted back to grass. The Ogallala aquifer which provides irrigation water for most of western Kansas has been declining for several years and the economic situation associated with high fuel prices (for the pumps) and a depleting aquifer has resulted in many farmers converting back to grass either to receive subsidy payments (CRP) or to graze livestock. This addition of grassland to the landscape has resulted in an increasing trend in bobwhite abundance in western Kansas over the last decade.

The 2008 April RMCS data had been summarized at the time of this report and it shows a >20% decline from the previous year. This is the second consecutive year that Kansas' breeding quail population has declined sharply. The winter of 2006-2007 was the worst winter in recent memory across much of Kansas. During that winter severe ice storms hit the state and deep snow remained on the ground for several weeks in some areas. The statewide breeding population declined by >40% from 2006 to 2007 with most of the decline occurring in the

southeast (>50%) and northwest (>75%) regions that were hit the hardest by the winter storms. The severe winter of 2006-2007 was followed by excessive rain and flooding that hit much of central and southeast Kansas in June 2007 resulting in poor productivity in those regions. Heading into the fall of 2007 quail numbers in southeast Kansas were at all-time lows. Other parts of the state didn't fare as bad; especially southcentral and southwest Kansas where quail numbers were still fairly strong. This past winter again brought several severe ice storms to central and southeast Kansas. The severe weather events that have hit Kansas over the last two years have pushed Kansas' breeding population to all-time lows in the southeastern and northwestern portions of the state. Other parts of the state haven't been affected as greatly and quail numbers in those regions have remained fairly stable in recent years.

Harvest and Regulations

The estimated bobwhite harvest in Kansas has remained relatively stable between 600,000 and 700,000 for each of the last 4 years. During that period, the greatest harvest has annually occurred in the southcentral region (125,000-170,000) followed by the Flint Hills region (100,000-120,000), and the southeast region (95,000-115,000). Lower bird densities and scattered populations are responsible for consistently lower annual harvests in the northeast (60,000-90,000) and northcentral (35,000-95,000) management regions. Many counties in these regions lie at the northern extent of the species' range and populations fluctuate much more erratically due to a more frequent occurrence of severe winter weather. The western management region encompasses the entire western 1/3 of the state and bobwhite populations in the more southerly counties of that region are not as frequently subjected to severe winter conditions. Thus, bobwhite harvest and abundance in the western region as a whole is generally greater than the northeast and northcentral regions. Total harvest in the western region

consistently falls in the middle of the pack but there have been some really good hunting opportunities in the southern and southeastern counties of this region in recent years. In fact, harvest in the western management region has increased every year from 51,000 in 2002 to >90,000 in 2006.

The structure and timing of Kansas' upland game hunting seasons were modified in 2006. After having separate bobwhite hunting zones (east and west) for many years the zones were eliminated. In past years the bobwhite season in the eastern zone opened concurrently with the pheasant season on the 2nd Saturday in November. For 2006, the pheasant season opener was moved up to the 1st Saturday in November. The bobwhite season opened statewide one week later on the 2nd Saturday in November. The closure of the bobwhite season was also moved up 10 days prior to the traditional 31 January closure. These changes resulted in much confusion and frustration amongst hunters due to a change in the traditional opening day of pheasant season and elimination of the concurrent bobwhite and pheasant openers that had become a tradition in central Kansas. An opinion survey was conducted following the 2006 seasons and the greatest percentage of hunters were in favor of moving back to the traditional pheasant opener on the 2nd Saturday in November. The vast majority (>70%) of hunters also wanted concurrent pheasant and bobwhite opening days. However, the KDWP commission opted to retain the same season structure for the 2007 and 2008 seasons to see if public sentiment toward the "new" regulations would change. After the 2007 season there was still much displeasure with the "new" season dates amongst Kansas' upland bird hunters. At the time of this report the commission was considering changes to both the pheasant and quail seasons that would take affect for the 2009 seasons. The recommended changes are to start both seasons statewide on the 2nd Saturday in

November and run them concurrently through January 31. For 2008, the pheasant season will still open on the 1st Saturday in November and quail season will open one week later (Table 1).

Translocations and Research

Last year the KDWP approved another 3-year (2007-2009) permit for the Ohio Division of Wildlife (ODW) to capture and remove = 250 bobwhite per year from Kansas. The ODW is in the process of trying to re-establish bobwhite populations at several re-claimed coal mine properties across Ohio. The permit issued by KDWP allows them to trap and translocate birds from the Wolf Creek Nuclear Power Operating Facility in east central Kansas. The facility is a non-hunted property that normally holds high densities of bobwhites. However, bobwhite production was poor on the area last summer due to the heavy rain and flooding that hit the region in June of 2007. As a result the ODW decided not to remove any birds from the property this past winter. They had removed ~150 birds a year from the property for several consecutive years prior to last winter. They are expected to return during the winter of 2008-2009 to capture more birds for their restoration efforts.

PRIVATE LAND PROGRAMS BENEFITTING QUAIL

KDWP Private Land Programs

The KDWP first instituted a program to provide technical and direct assistance in 1973. The programs currently delivered by private lands biologists include wildlife fee funded programs, P-R funded grant programs, and other governmental grants. These programs provide important services and information to landowners and residents of Kansas. Many of the programs benefit bobwhites and they are particularly important since 97% of the state is in private ownership. Below are brief descriptions of the specific programs that are currently benefiting bobwhites across Kansas.

Southeast Kansas Quail Initiative (SEKQI)—This initiative started in 1999, targeting four counties in the SE part of the state (Allen, Bourbon, Crawford, and Neosho). Landowners are paid established rates for various quail friendly practices. The primary practices have included landowner incentives to encourage enrollment in USDA programs, converting fescue to native warm season grasses, establishing new stands of native grasses and forbs, hedgerow renovation, shrub planting, food plot establishment, deferred grazing, and renovation of mature grass stands. Since 2001, KDWP has developed 306 landowner agreements and has directed $465,000 towards quail friendly practices on private land in southeast Kansas.

KDWP Wildlife Habitat Improvement Program (WHIP)—The KDWP offers its own WHIP program separate from the USDA WHIP program. KDWP personnel provide technical and direct assistance to landowners. KDWP provides use of tree planters and grass drills, cost share of 50% up to $500 for approved projects such as shelter belts; native grass planting, wetland development food plots, guzzlers, strip disking, and prescribed burning. In some Districts, MOU's have been developed with Conservation Districts to deliver habitat funds according to KDWP guidelines. In many cases, other groups such as QU and PF have provided matching funds.

Pheasant Initiative (PI)—This initiative started in 1998 in four NW counties to improve pheasant habitat by providing incentives ($50/acre) to producers willing to implement a continuous conservation reserve practice (CCRP; e.g. grassed terraces or crosswind trap strips). These incentives were made eligible to additional counties in 2003 because all funding was not committed in the target area. In 2005, this initiative was established throughout the pheasant range in Kansas. This area overlaps a substantial amount of the bobwhite range in the central and the western part of the state so this program also benefits bobwhites. Funding remains at

$100,000 annually with $66,000 going to on the ground habitat work. Projects emphasize CRP enhancement through interseeding, strip disking and burning. In 2006, a total of 1,698 acres were directly enhanced by performing one or more practices on each acre. Several KDWP administrative regions have developed partnerships with local PF chapters and Resource Conservation and Development Council for additional funding or administration of projects.

Buffer Coordinator Program–Recognizing the importance of buffers (strip habitats) to edge-associated upland birds, KDWP initiated a program to hire temporary employees in the County Conservation District Offices to encourage enrollment of grass buffers into the continuous conservation reserve program (CCRP). This federal, state, and local partnership is similar to the successful program in Iowa. Over $350,000 was available in 2003 from KDWP, an EPA 319 grant, and local contributions. KDWP contributes $150,000 per year. The State Conservation Commission administers the program and NRCS provided a full time coordinator from 2004 to present. A total of 45 counties out of 105 participated in the program in 2006.

USDA Farm Bill Programs

Conservation Reserve Program (CRP)-Kansas continues to be one of the national leaders in terms of CRP enrollment. The most recent estimates reveal that >3 million acres in Kansas are currently enrolled in general sign-up CRP. Additionally, there are >85,000 acres enrolled in CCRP practices in Kansas. One of the most popular CCRP practices is conservation practice 33 (CP-33; Habitat buffers for upland birds) which provides cost-share and rental payments to establish grass borders around crop fields. Because the CP-33 program was so popular in Kansas the state was awarded additional acreage during 2 different reallocations (62,500 acres total). As of early April 2008 there were 32,806 acres enrolled in the program. Most of the acreage enrolled in CP-33 is in the eastern 2/3 of the state within Kansas' primary

bobwhite range. The KDWP has been monitoring the response of quail and pheasants on a random sample of enrolled acreage and both species have responded positively to the addition of the new habitat.

Landowner Incentive Program (LIP) – This initiative was started in 2006 with a $500,000 grant from the U.S. Fish and Wildlife Service. Targeted areas are the mixed-grass and short-grass prairie ecoregions of Kansas. Landowners receive 75% cost assistance for implementing practices that benefit species in need of conservation (SINC). Seventeen projects, primarily in the Red Hills of southwest Kansas, have been selected for implementation, which will impact 21,129 acres and benefit 18 Species in Need of Conservation (SINC). Common practices include mechanical brush removal, prescribed fire, and native grass planting. Total cost of completing these projects is $677,301. Although designed to benefit SINC species, these projects have also benefited bobwhites.

State Acres for Wildlife Enhancement (SAFE) – Recently, a total of 30,100 acres was allocated to Kansas for the newly created SAFE program. The KDWP's SAFE proposal has been approved and it will focus on creation of bobwhite and pheasant habitat in and around row crop fields throughout the state. The SAFE program will allow enrollment of portions of expiring CRP acreage, center-pivot irrigation corners, and interior strips within fields (e.g. terraces or cross-wind trap strips); up to 20% of the entire field. The practice will allow for some limited grazing and haying that will make the practice more acceptable to landowners and provide alternative methods to create needed disturbance within mature stands of grass.

Conservation Reserve Enhancement Program - Another quail friendly practice that has just been created through a partnership between the state of Kansas and the Farm Service agency is the conservation reserve enhancement program (CREP). Through voluntary enrollment the

program will remove up to 20,000 acres of cropland along the Arkansas River in portions or all of the following counties: Barton, Edwards, Finney, Ford, Gray, Hamilton, Kearny, Pawnee, Rice, and Stafford. The enrolled acres will be under contract for 14-15 years and seeded to a mixture of grass and forbs. The primary purposes of this CREP are to improve flow in the Arkansas River and reduce groundwater usage but quail and other upland birds will also benefit.

Table 1. Upland game season dates and bag limits in Kansas, 2008.

Season	Dates	Daily Bag	Possession Limit	Open Areas
Prairie chicken (Early)	15 Sep. – 15 Oct.	2	8	East of Hwy. 281
Youth Pheasant	25 – 26 Oct.	2	4	Statewide
Youth Quail	25 – 26 Oct.	4	8	Statewide
Pheasant	1 Nov. – 31 Jan.	4	16	Statewide
Quail	8 Nov. – 31 Jan.[a]	8	32	Statewide
Prairie chicken (Regular) * East and Northwest Units	15 Nov. – 31 Jan.	2	8	Entire state excluding southwest Unit
Prairie chicken (Regular) * Southwest Unit	15 Nov. – 31 Dec.	1	4	South of I-70 & W of Hwy. 281

[a] The quail season dates had not yet been officially approved by the commission at the time of this report.

Figure 1. The 6 northern bobwhite management regions in Kansas.

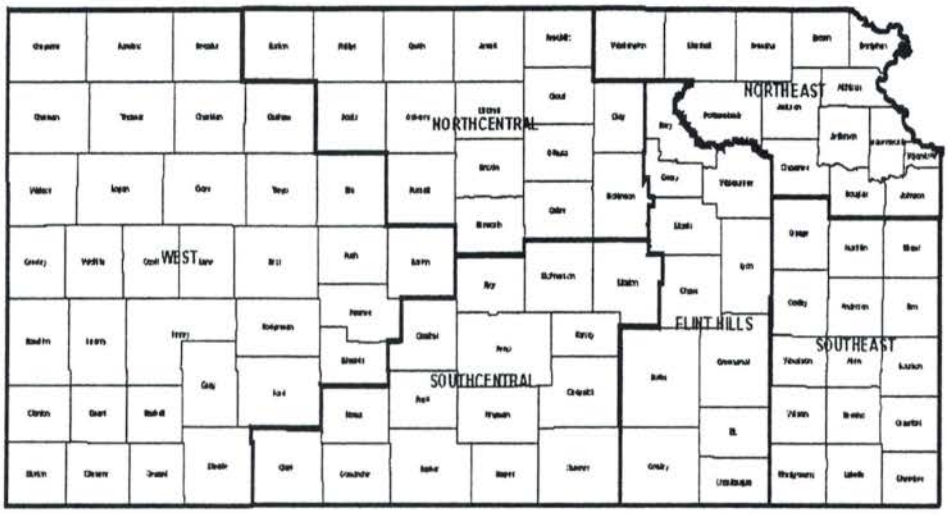


Figure 2. The statewide Kansas northern bobwhite production index (young:adult) derived from the July rural mail carrier survey, 1981-2007.

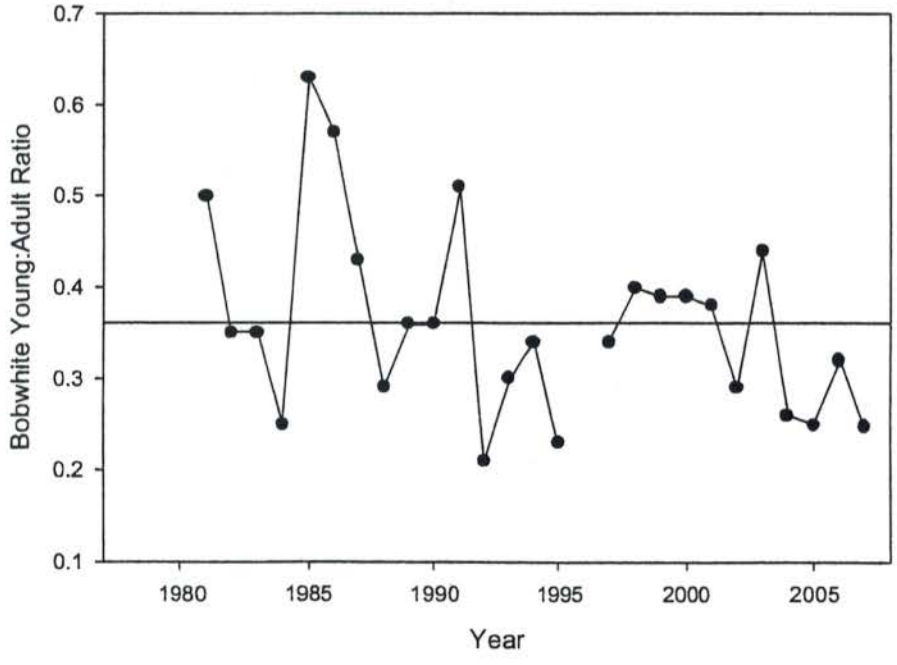


Figure 3. Northern bobwhite production indices (young:adult) derived from the July rural mail carrier survey for each of the 6 small game management regions in Kansas, 1981-2007.

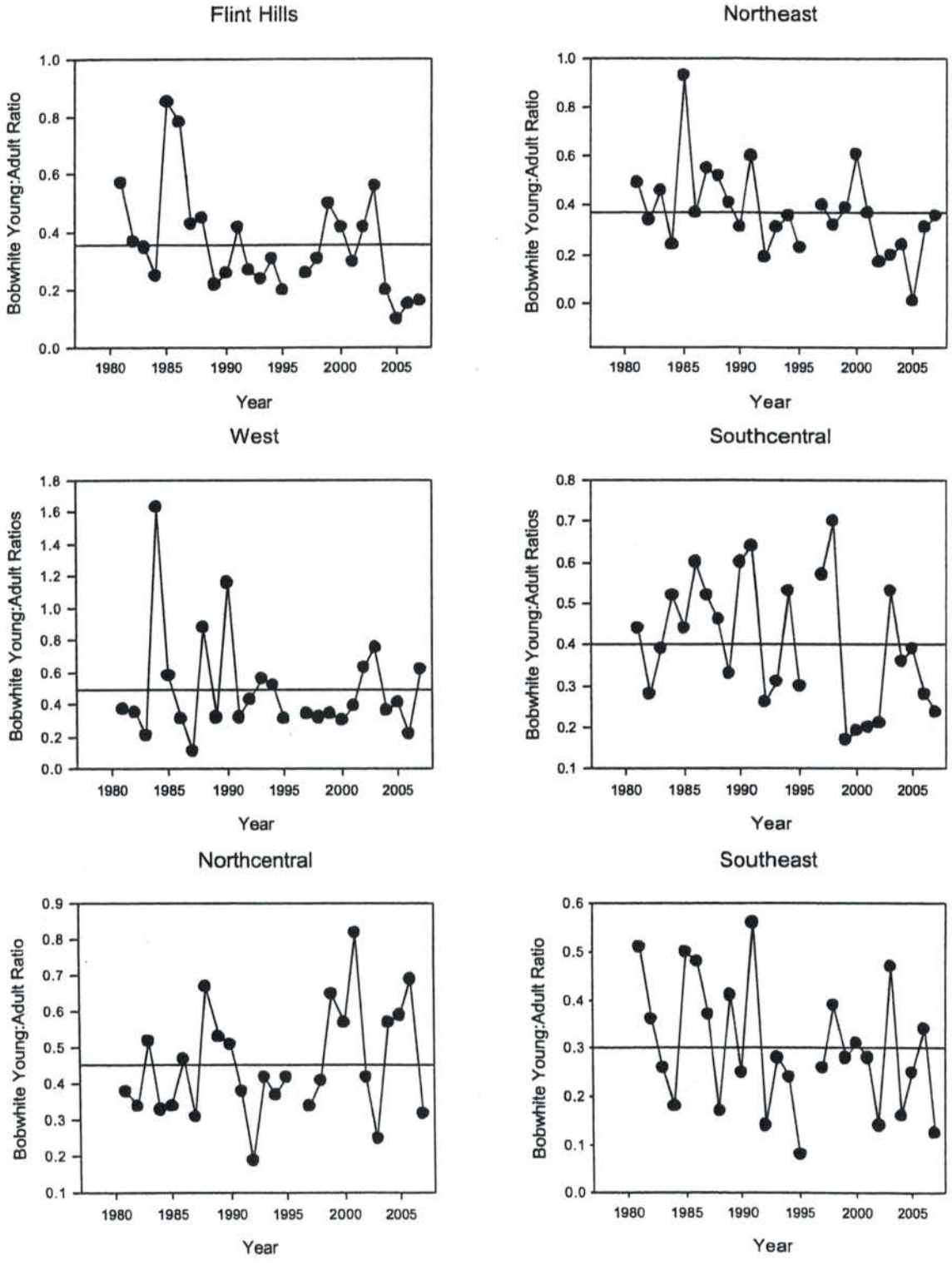


Figure 4. Average bobwhite brood size and estimated frequency distribution of hatching dates in Kansas derived from August roadside counts, 2007.

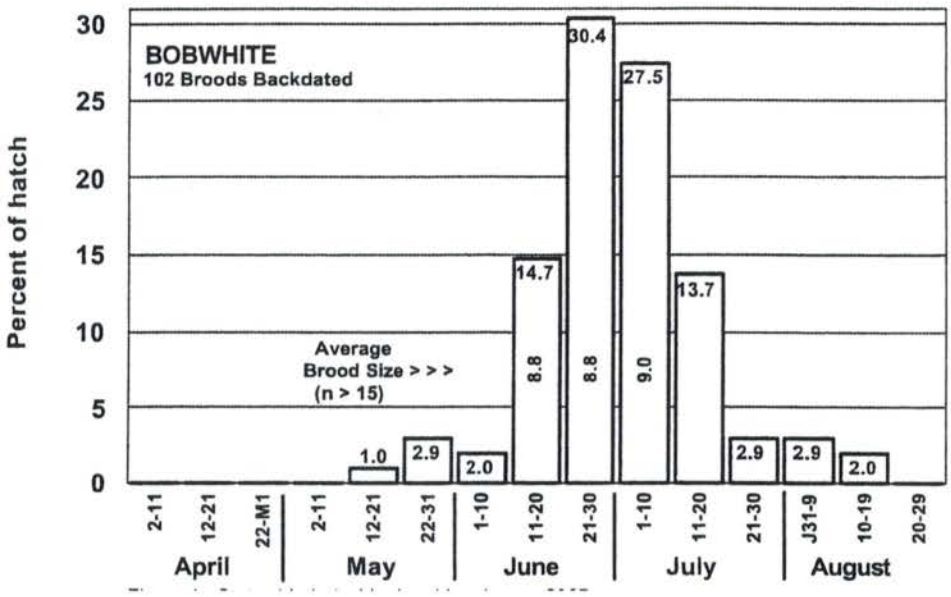


Figure 5. Trends in northern bobwhite abundance in Kansas as indexed by the June whistle count survey (birds/stop; 1998-2007), the April rural mail carrier survey (RMCS) (birds/100 mi. driven; 1963-2007), and estimated hunter harvest (millions; 1962-2007).

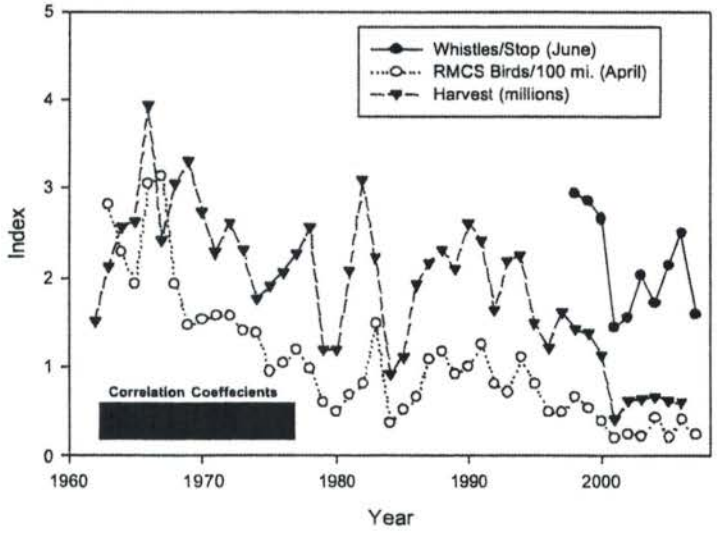
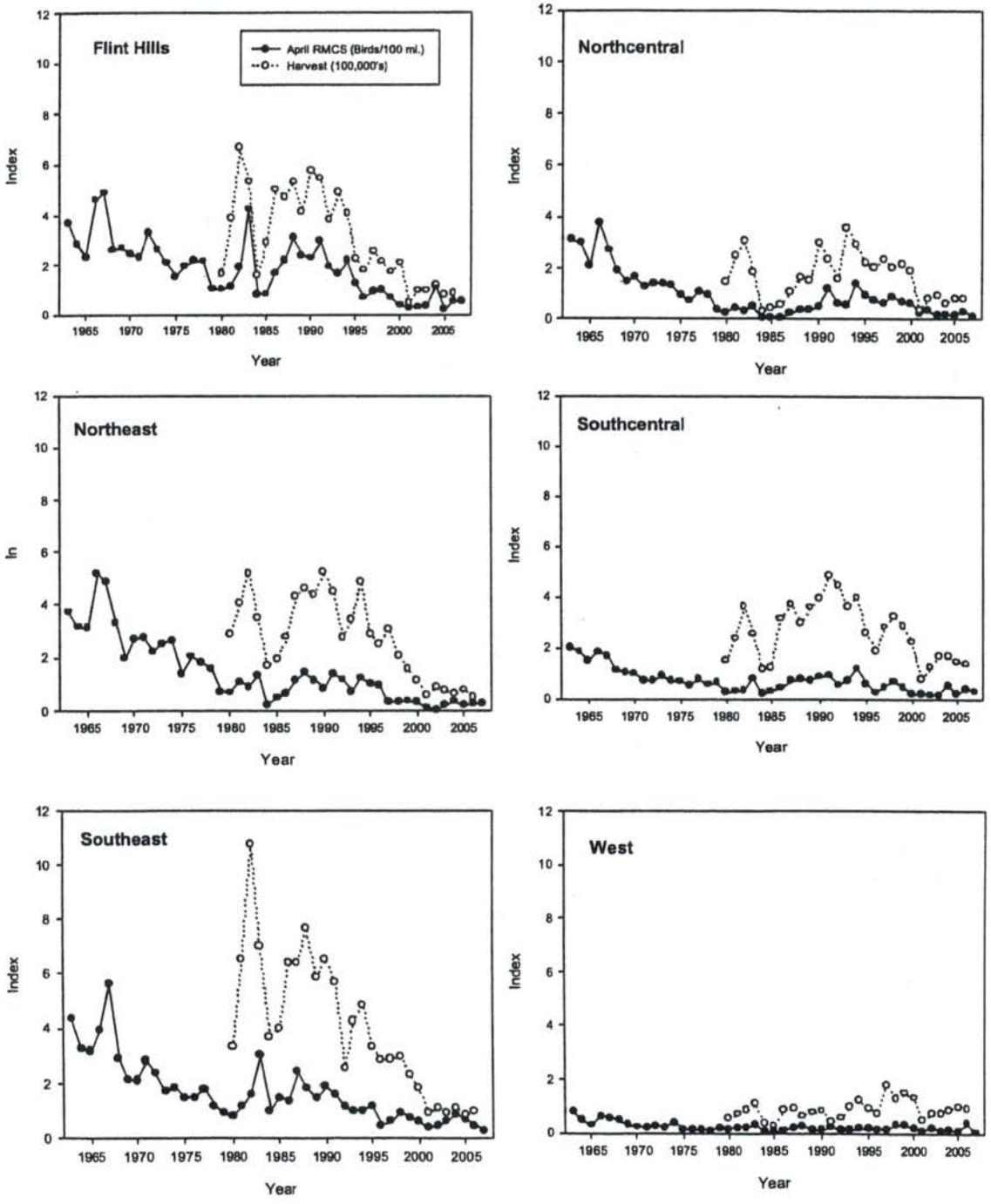


Figure 6. Regional estimates of hunter harvest (100,000's) and indices to bobwhite abundance derived from the April rural mail carrier survey (RMCS; birds/100 mi. driven).



2008 SEQSG Program Report
Kentucky Department of Fish and Wildlife Resources
July 15-18, 2008

Infrastructure of Small Game and Private Lands program

This past year has once again seen several new faces at the field level. Ten biologists currently fill the NRCS cost-shared positions supervised by 3 Farm Bill liaisons. KDFWR now has 15 private lands biologists (PLBs) supervised by our 5 regional coordinators. The Landowner Incentive Program was able to hire a new coordinator to oversee projects and funding around the state. The LIP work crew was re-staffed and the LIP biologist in east Kentucky continues to make progress in that portion of the state.

Partnerships – The Nature Conservancy (TNC) continues to be a valuable partner. TNC contributed the matching funds towards KDFWR's first and third LIP grant, hired a LIP biologist for the Bayou de Chien and Grand Rivers area. Unfortunately, TNC in KY has fallen upon fiscal limitations, and we are not partnering on any cooperative positions, but KDFWR staff continue to work with TNC on a routine basis.

Along with TNC, the KY State Nature Preserves Commission (KSNPC) also partnered with us on our first and third LIP grant. They hired a statewide plant ecologist to assist in locating potential LIP projects. Both TNC and KSNPC assist with ranking LIP projects, assigning cost-share rates, and oversight of the LIP grant. KDFWR's second LIP grant adds in another partner—Rocky Mountain Elk Foundation (RMEF). They are providing the matching funds and will assist in locating projects. We received another LIP grant as an extension of our first LIP grant, and we submitted an additional grant for more funding.

Quail Unlimited (QU) continues to be supportive of KDFWR through equipment grants, seed distribution, and creative thinking. QU, KDFWR, and NRCS are currently testing several different grass/forb mixes on WMAs throughout the state in an attempt to reduce stand thickness, prevent winter blow down of grasses, and increase the amount of diversity and bare ground. QU state chapters donated the grass and forb seed, Dave Howell coordinated the seed delivery, and QU will also purchase signs to note the demonstration areas. QU and KDFWR were awarded a NFWF grant to promote CP-33 and mid-contract management. The grant will create a 3-year internship program to promote wildlife-friendly practices. State chapters also purchased two fully-outfitted Mules, supported 330 acres of WMA habitat work, purchased burning equipment, funded advertisements for conservation programs, and matched a grazing lands projects.

KY Division of Conservation (DOC), already partnering with us on CREP, is now involved in LIP as well. DOC is coordinating the payments for LIP cost-share to landowners. Additionally, they help coordinate payments for USFWS Partners payments.

Kentucky Department of Fish and Wildlife Resources Private Lands Programs: descriptions and 2007-08 accomplishments

Habitat Improvement Program (HIP) - We are in the 21st year of the Habitat Improvement Program. The program is our primary state funded program for private landowners across Kentucky. Any landowner can receive technical assistance, a management plan, and equipment loan. From May 1, 2007 to April 30, 2008 we have provided technical guidance to 404 landowners with 76,349 acres. Additionally, we cost shared a wide variety of practices, helping to improve numerous acres for wildlife across the state (Table 1). The program provides these funds at a rate of 75% with a $1000 limit per landowner per year. In many instances, we deliver cost-share in the form of equipment use, seed, and herbicide for landowners. Therefore, bulk prices for those products extend limited financial resources and maximizes habitat on the ground. The cost share money for next years' budget is $159,000. Over the life of the program, we have provided technical guidance to more than 11,000 landowners owning over 2.1 million acres across Kentucky.

Kentucky Bonus Programs – In Kentucky, there are 4 bonus programs sponsored by KDFWR and Kentucky Quail Unlimited, in cooperation with USDA Farm Service Agency and Natural Resources Conservation Service. These programs allow landowners participating in USDA's Continuous Conservation Reserve Program (and EQIP in one case) to take advantage of bonus payments by selecting to use native species, increasing forb rates, or implementing various practices. For example, the "Buffers for Bobwhites" program provides landowners a one time payment of $25.00/acre (Maximum 20 acres/$500 per landowner) for planting native warm season grasses and legumes or wildlife friendly cool seasons on all or a portion of filter strips, grassed waterways, and riparian buffers on CCRP acreage. Another 4 county "Wildlife Bonus Program" in the Purchase region offers bonus payments for wildlife friendly practices including light disking, prescribed burning, and native grass & forb plantings on CCRP and general CRP acres. The "Bobwhite Bonus Program" in 7 counties of the Bluegrass region provides bonus payments for planting CCRP buffers and EQIP pasture and hay plantings to warm season grasses, and incentives to strip disk or convert fescue on non-CRP lands. The final bonus program targets Mclean, Ohio, and Webster counties and provides additional incentives to enroll acres in CP-33. The program pays a $150/acre bonus payment for up to 10 acres. The following accomplishments have been completed under these programs in 2007:

- Buffers for Bobwhites (12 counties Green River region) – 0 acres of projects
- Wildlife Bonus Program (4 counties Purchase Region) – 130 acres of projects
- Bobwhite Bonus Program (7counties Bluegrass Region) – 19 acres of projects

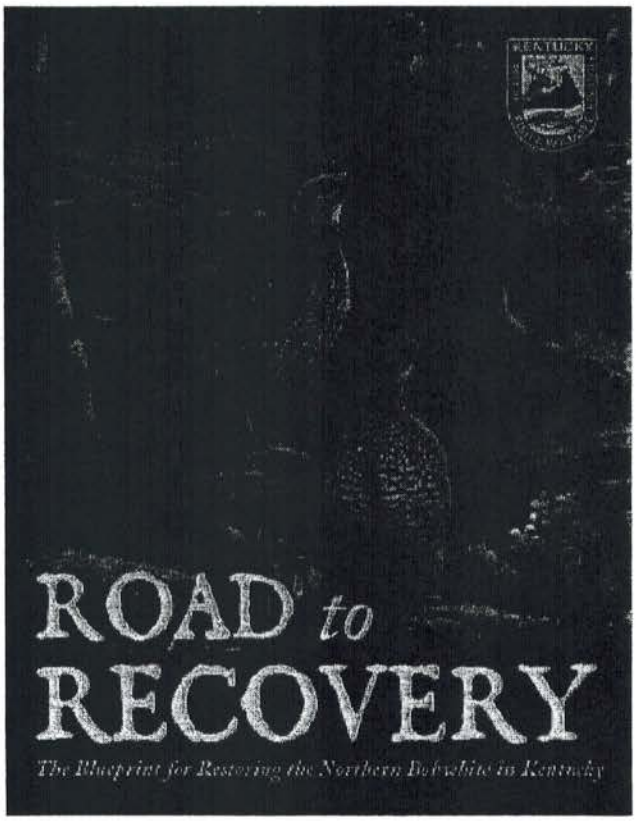
CREP - Kentucky's CREP program is starting its 6th year, and the program is continuing to grow. In 2007, the area was doubled in size, and a new practice was added (CP29). In just 3 months, contracts nearly doubled (previous 5 years 626 contracts, 2007 580 contracts) and the enrolled acreage increased from 11,700 acres to 31,100 acres. Two practices, riparian buffers and native grasses, accounted for 97% of the acreage contracted during the first 5 years. However, CP29 quickly enrolled nearly 20,000 acres making it the dominant practice in the program.

Landowner Incentive Program (LIP) – To date, Kentucky has received over $3 million dollars through the USFWS's Landowner Incentives Program. These funds have been used to hire biologists, crew and provide cost-share and incentives to landowners. More than 400 applications have been received with more than 300 of these approved and implemented across the state. Practices include tree planting, removal of exotic and pest species, prescribed burning, cave gating, fencing, stream restoration and wetland creation/restoration. Our partners, TNC, KSNPC and RMEF continue to provide valuable technical support and project guidance. The Kentucky Division of Conservation continues to process payments to insure a quick return to landowners of out of pocket expenses. KDFWR has hired a LIP coordinator and a biologist for the eastern region of the state with the work crew continuing to be a valuable asset across the Commonwealth.

What's New – Programs, Initiatives and Partnerships

Thanks to the on-going partnership with QU, Kentucky drivers will have an opportunity to purchase a quail specialty license plate this summer. Proceeds will be used to benefit bobwhite across the state.

Northern Bobwhite Conservation Initiative - The goal for NBCI is to restore northern bobwhite populations *range wide* to an average density equivalent to that which existed on improvable acres in the baseline year of 1980. Over the next 20-25 years, Kentucky must add 135,000 coveys to the population through habitat improvement to achieve their portion of NBCI's goal. Obviously, this will take a very aggressive approach to achieve such lofty goals, but the momentum is gaining on a national level to devote more funds towards this project. In Kentucky, we have already begun to capitalize on this push to restore quail numbers. We've worked with NRCS and FSA to maximize benefits to grassland birds in Farm Bill programs and to maximize the amount of acreage getting into programs. We have completed the Kentucky "step-down" NBCI plan along with a new monitoring protocol that will be used to measure population changes of grassland birds within 8 quail focus areas located around the state. Aggressive habitat improvement work will begin in 4 quail focus areas this spring. Thirty-five partner agencies and organizations endorsed KY's Quail Restoration Plan.



Rx Fire Committee – KDFWR formed a prescribed fire committee to critically evaluate the utilization of fire by the Wildlife Division. The committee will not only evaluate techniques for the application of fire. They will discuss and make recommendations regarding staff training needs, burn plan parameters, post-burn evaluation, and legislative needs to make prescribed fire a more prominent tool in the landscape. On another fire

note, Kentucky had its inaugural Fire Council meeting in early June with over 40 participants from NGO's, federal and state agencies from around the state. The goal is to have a formal council by 2009 to address legislation, training, and information and education.

Education & Marketing- With help from department graphic designers we were able to create 2 new brochures advertising the Habitat Improvement Program and Quail Restoration. Each brochure targets landowners and managers by featuring eye catching graphics coupled with easy-to-read text.

Quail Unlimited Habitat Team – Quail Unlimited, The Kentucky Chapter of the Nature Conservancy, and KDFWR partnered on a Doris Duke Grant to fund a "Habitat Team". The crew began work this spring, primarily focusing on prescribed fire as a CRP mid-contract management practice. An unseasonably wet spring in Kentucky made prescribed burning a challenge; however, the crew was able to successfully burn 1,200 acres in west Kentucky. The team has also been conducting shrub enhancement projects with a skid steer and Marshall Tree Saw. The vision for this team is to be completely self-supporting largely through cost-share payments available through the Farm Bill. Despite poor weather conditions, the crew is well on its way to meeting that goal.

Recommendation	Acres/Units
Reimbursed Practices	
Cool Season Grasses	100 ac
Fencing	5,767 ft
Fescue Eradication	335 ac
Forest Openings	2 ac
Legumes	103 ac
Mowing (ie., strip mowing of NWSG)	1,712 ac
Native Warm Season Grasses	885 ac
Nesting Structures	6
Prescribed Burning	37 ac
Shallow Water Wetlands	322 ac
Soil Amendments	102 ac
Streamside Restoration	300 ft
Timber Stand Improvement	100 ac
Trees & Shrubs	739
Wildlife Water Holes	53 units

Table 1. Habitat Improvement Program accomplishments by practice, 1 May 2007 through 30 April 2008.

Table 2. Landowner Incentive Program (LIP) accomplishments by practice for entire LIP grant, in partnership with TNC and KSNPC. These accomplishments are from the life of the LIP grant to date. Numbers are lumped into general groups (e.g., all tree planting information was combined), and not all practices completed are listed.

Practice Title	Quantity	Units
Cave/Sinkhole Practices		
Cave Gate	2	gate
Cave/Sinkhole Protection Incentive	2	caves/sinkholes
Sinkhole Cleaning	2	holes
Wetland Practices		
Wetland Creation	21.6	ac
Grassland Practices		
Grass Cover Herbicide Application	2,100	ac
Grass Seeding and Seedbed Preparation	1,600	ac
Native Warm Season Grass	7,500	lbs
Introduced Grasses (for grade projects)	100	lbs
Forbs	1,200	lbs
Legumes	100	lbs
Old Field Regeneration - Herbicide	33	ac
Labor		
Crew Labor - Prescribed Burning	5,000	ac
Crew Labor - Miscellaneous*	2,306	hrs
Prescribed Fire - Landowner Labor	191	ac
Tree/Shrub Planting - Landowner Labor	156	ac
Tree/Shrub Practices		
Tree/Shrub seedlings	101,872	seedlings
Local Ecotype Tree/Shrub Seedlings	336	seedlings
Erosion Control Practices		
Streambank Stabilization	400	ft
Grade Control	5	projects
Other		
Bat Boxes	100	boxes
Permanent Protective Fencing	38,500	ft

* Includes hand-control of invasive woody species, planting trees, and creating firebreaks.

Southeast Quail Study Group Report

Louisiana - 2008

Status

Fall whistling surveys were conducted along 32 routes in 5 habitat types (Fig. 1). There were 16 assumed zero routes. The Southeast Loblolly and the Northwest Loblolly-Shortleaf-Hardwood Regions had the highest call per stop value, followed by the Mississippi/Atchafalaya River Agricultural Belt, the Longleaf Region, and the Acadiana Rice Belt. Data are summarized in Table 1.

Table 1. Statewide fall bobwhite whistling survey results, 2007.

Habitat Type	Calls Per Stop 2007	Calls Per Stop 2006	Long-Term Mean Calls per Stop 1983-2006
SE Loblolly	0.09	0.06	0.21
NW Loblolly-Shortleaf-Hardwood	0.05	0.06	0.11
Miss./Atchaf. R. Agricultural Belt	0.02	0.02	0.04
Longleaf	0.02	0.01	0.13
Acadiana Rice Belt	0.004	0.01	0.09

The 2007 regional indices (calls per stop) remain below the long-term averages. The number of routes on which no quail were heard was tied with 2006 for the highest recorded since the inception of this survey. This year, no quail were heard on 29 routes, including those assumed to be zero.

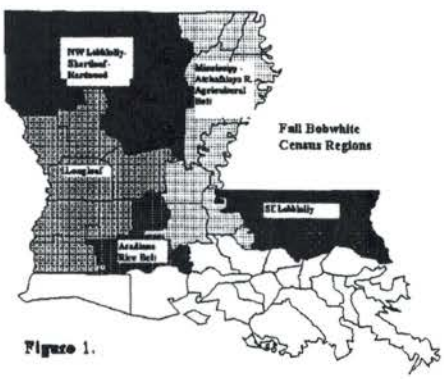


Figure 1.

Adverse weather and habitat deterioration have reduced bobwhite quail abundance over the last 20 years. Year to year fluctuations are due largely to weather conditions. However, deteriorating habitat conditions are thought to be responsible for the long-term decline. During 1983-92, the number of routes on which no quail were heard ranged from 4 – 14 per year, and averaged 8.0 routes per year. Since 1993, the number of routes on which quail were not heard ranged from 8-29 per year, and averaged 17 routes per year.

There are a couple of positive trends for quail in Louisiana. Much of the land in the Mississippi River alluvial valley has been enrolled in CRP or WRP. Most of this acreage consists of hardwood tree planting, but in the short-term, bobwhites have benefited. Bobwhite numbers appear to be increasing on land devoted to sugar cane production in south Louisiana. Sugar cane fields are traversed by numerous ditches, and the associated ditch banks seem to be providing adequate cover for bobwhites. In addition, use of less toxic pesticides seems to have had a positive impact on bobwhites.

Quail Management Initiatives

- A SAFE project to restore grassland habitat in the Gulf Coastal Prairie was developed and approved. The goal of the project is to restore a minimum of 3500 acres of grassland and shallow water areas in certain southwest Louisiana parishes.

- The Acadiana Grassland Restoration Initiative (AGRI) is a partnership among the LA Department of Wildlife and Fisheries, the Acadiana RC&D Council, the Nature Conservancy and the Atchafalaya Region Chapter of Quail Forever. The AGRI is a 3-part project to address obstacles to grassland establishment in south Louisiana. The AGRI will involve training of natural resource professionals, establishment of demonstration farms, and providing grassland establishment services to private landowners. This project is funded by the State Wildlife Grants Program with matching funds from the AGRI partners.

- The West Gulf Coastal Plain Prescribed Fire Initiative is a partnership among the LA Department of Wildlife and Fisheries, U.S. Fish and Wildlife Service, and the LA Office of Forestry. This project will provide funding for prescribed burning on private land. Emphasis will be placed on longleaf pine and shortleaf-oak-hickory forest types. Initial burns will be provided without cost to landowners accepted into the program. A management plan will be developed and assistance will be provided to obtain cost-share funding for future scheduled burns through other programs such as WHIP and FLEP. This project is funded by the State Wildlife Grants Program with matching funds from the project partners.

- The Department of Wildlife and Fisheries has restructured its Wildlife Division staff to create the Landowners for Wildlife Program. The LWP is directed at providing technical assistance services to private land managers in Louisiana. Thirteen field biologists have been assigned to this program and will spend 90% of their time on private land technical assistance.

MARYLAND
State Report
Southeast Quail Study Group Meeting, 2008

POPULATION STATUS

The most reliable bobwhite population data for Maryland are obtained through the Breeding Bird Survey (BBS). The high density of routes throughout the state has provided consistent sampling of the entire state since 1966. Based on the most recent BBS data, statewide bobwhite populations have declined 5% annually since 1966 and 7% per year since 1980. Declines have not been uniform across the state. Portions of the eastern region still harbor moderate quail populations but pockets of habitat containing quail in the remainder of the state are increasingly rare and isolated. The annual hunter mail survey estimates approximately 800 hunters harvested about 1,800 bobwhites in the 2006-07 season.

PRIVATE LAND HABITAT PROGRAMS

The Conservation Reserve Enhancement Program (CREP) has considerable potential to make landscape-level habitat changes in Maryland. The Maryland CREP Partnership, between the Maryland Departments of Agriculture and Natural Resources, enrolled approximately 74,600 acres by the end of March 2008; 25,400 acres short of the 100,000 acre goal. Efforts to revitalize the program that has slowed in the past few years were initiated by the new administration in October 2007.

CP-33 enrollments began in 2005 but participation has been limited. Although some interest in quail restoration is evident, the CP-33 practice does not provide the large payments and incentives that CREP does.

MANAGEMENT AND RESEARCH

Work is continuing on the development of several early-successional habitat demonstration areas. A variety of bobwhite habitat creation and enhancement practices including selective herbicide application, timber thinning, field border development, and fallow field management are being employed in an effort to increase quail abundance and provide a site to host periodic workshops. Fall covey call surveys have shown a substantial increase in bobwhite populations following management.

A pilot project to determine the efficacy of relocating wild-trapped bobwhites was conducted during the last 2 winters. A total of 4 coveys of wild quail were relocated to an intensively-managed WMA with previously low densities. Spring and fall surveys are being conducted to determine the success of the effort. Hopefully this technique can be used in the future to re-establish quail in areas that have restored a significant amount of habitat but lack a nearby "source" population.

Mississippi Department of Wildlife, Fisheries, and Parks

Southeast Quail Study Group State Agency Report

SAM POLLES, Ph.D.
Executive Director

www.mdwfp.com

Rick Hamrick
Small Game Program Leader
910 Barnett Drive
Starkville, MS 39759
Phone: 662-320-9375
Email: rickh@mdwfp.state.ms.us

Dave Godwin
Small Game/Turkey Program Coordinator
Box 9690
Mississippi State, MS 39762-9690
Phone: 662-325-5119
Email: dgodwin@cfr.msstate.edu

Wildlife Bureau Reorganization

In 2007, the Wildlife Bureau within the Mississippi Department of Wildlife, Fisheries, and Parks (MDWFP) reorganized to better serve the public and natural resources of Mississippi. This reorganization was a substantial boost to service capability of the Wildlife Bureau. During the 2008 fiscal year, 10 new technical staff members were hired into the Wildlife Bureau. Approximately 10 additional positions are being incrementally filled in order to fully staff all vacant positions within the Wildlife Bureau. This reorganization allows individuals to work within programs that best fit their interests and abilities. From a quail habitat perspective, perhaps the most significant progress made in this reorganization was hiring a biologist dedicated specifically to Small Game Program administration and the creation of a new Private Lands Habitat Program. Other aspects of the reorganization include staff dedicated to administration of Deer, Turkey, Migratory Birds, Public Lands, Black Bear, Exotic Wildlife, and Alligator/Furbearer/Nuisance Programs. A Regional Biologist Program was also implemented to provide regional support to all programs.

Northern Bobwhite Conservation Initiative

Focused implementation of Mississippi's Northern Bobwhite Conservation Initiative step-down plan (MSNBCI) began in 2008. A series of bobwhite habitat management promotional meetings were conducted by the MDWFP in an effort to inform and educate landowners about bobwhite population declines, habitat requirements and management, and availability of technical assistance. Eight focal counties were selected to begin intensively promoting quail habitat and population restoration. The initial focal counties selected include

Amite, Marion, Monroe, Panola, Prentiss, Sunflower, Union, and Yazoo (Figure 1). Mississippi State University Extension Service county offices coordinated and hosted these meetings. The concept of promotional meetings in focal counties was piloted as an initial step towards achieving some of the intermediate, county-level habitat and population goals set forth in the MSNBCI plan. The focal county approach was chosen to focus limited personnel time on intensive promotional work in an effort to develop larger-scale patches of bobwhite habitat. The MDWFP will continue to provide technical assistance to landowners statewide. The response to and support of these initial meeting was very encouraging. Thus far, 7 meetings have been conducted, and collectively, more than 300 landowners and bobwhite enthusiasts have attended these meetings. Many other cooperators have assisted the MDWFP in MSNBCI efforts. Partner agencies and organizations include: Delta Wildlife, Inc.; East Gulf Coastal Plain Joint Venture; Lower Mississippi Valley Joint Venture; Mississippi Department of Agriculture and Commerce; Mississippi Forestry Commission; Mississippi Museum of Natural Science; Mississippi State University, Extension Service; Mississippi State University, Forest and Wildlife Research Center; Mississippi Wildlife Federation; United States Fish and Wildlife Service; USDA-Farm Service Agency; USDA-Natural Resources Conservation Service; USDA-United States Forest Service; and Wildlife Mississippi.

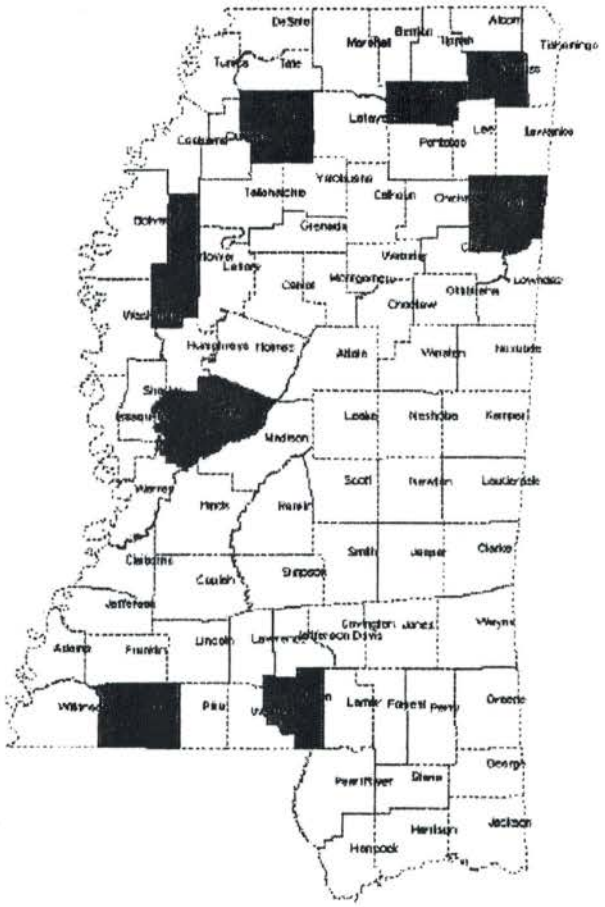


Figure 1. Mississippi focal counties selected for intensive NBCI promotional efforts.

Technical Assistance

The MDWFP Private Lands Habitat Program conducted more than 200 private lands site visits during July 2007 – June 2008. While only about a dozen of these site visits were specifically for a quail habitat interest, habitat recommendations made by biologists for other upland game species have the potential to benefit quail. The MDWFP Small Game Program conducted 16 private lands site visits during 2007 – 2008, with almost all of these site visits pertaining to quail. The Small Game Program responded to over 200 requests for technical assistance via phone, email, or informational packets. A number of quail habitat site visits were generated by quail habitat promotional meetings conducted in NBCI focal counties. One objective of these meetings was to increase public awareness of the MDWFP's new Private Lands Habitat Program and provision of technical assistance.

Small Game Program staff also provided habitat management technical guidance and funding, primarily for quail, on state and federal public lands. During the 2008 fiscal year, 30 public lands site visits were made relative to small game habitat management.

Public Lands Projects

Several public lands habitat projects were implemented or planned during 2007. A 40-acre native warm-season grass (NWSG) pilot project was implemented on Divide Section WMA. Divide Section WMA is part of US Army Corps of Engineers (USACE) mitigation lands associated with the Tennessee-Tombigbee Waterway project. Spoil areas created from construction of the Waterway were planted in bahiagrass, sericea lespedeza, and other undesirable vegetation in the 1980's for soil stabilization. If NWSG establishment and soil stabilization are successful, additional spoil areas may be converted to NWSG in the future. Hell Creek and Hamer WMAs are two state-owned management areas that have an area-wide quail habitat management emphasis. Along with heavy thinning of upland pine forests at Hell Creek, agricultural field buffers were increased in width and planted to NWSG in 2007. Hamer WMA was recently acquired, and is currently undergoing intensive habitat management activities. In 2007, old hay fields were treated with herbicide to eradicate bermudagrass and fescue. Agricultural fields were removed from a farm lease, and about a third (400 acres) of former row crop fields were planted to NWSG in June 2008, with the remainder to be planted or naturally regenerated in subsequent years. A forest management plan is being developed to improve structure and composition of upland hardwood forests on the area. Prescribed fire has already been reintroduced to these upland forest stands and will continue to be a part of the forest management strategy. Several other wildlife management areas around the state are targeted for future upland wildlife habitat enhancement projects.

Cooperation with Federal Agencies

The MDWFP participated in the Mississippi Natural Resources Conservation Service (NRCS) State Technical Committee. The MDWFP also provided technical assistance to federal agencies in the implementation of federal Farm Bill Programs at the county and state levels.

In 2007, the USDA-Farm Service Agency (FSA) announced the Safe Acres for Wildlife Enhancement initiative (SAFE) under the Conservation Reserve Program (CRP). SAFE was designed to address the habitat needs of endangered, threatened or high-priority fish and wildlife species. Two grassland CP38 practices were developed for Mississippi. A CP38 – Bobwhite Quail Habitat practice was developed to increase grassland wildlife habitat in row crop agricultural systems and to complement CP33 – Habitat Buffers for Upland Birds. The practice consists of establishing native grasses, wildflowers, and shrubs to provide critical habitat for bobwhites and other grassland wildlife. There are 29 counties throughout Central and North Mississippi that are eligible for this practice: Alcorn, Benton, Bolivar, Chickasaw, Clay, Coahoma, Desoto, Hinds, Holmes, Humphreys, Lee, Leflore, Lowndes, Madison, Marshall, Monroe, Noxubee, Panola, Pontotoc, Prentiss, Quitman, Sharkey, Sunflower, Tallahatchie, Tate, Tippah, Tunica, Union, and Yazoo. There are 2,950 acres available for enrollment in the CP38 – Bobwhite Quail Habitat practice. The CP38 – Black Belt Prairie practice was jointly developed with Alabama to restore native prairie grasses and wildflowers in row crop agricultural systems. The Black Belt Prairie region of Mississippi is one of the most degraded ecosystems in the state, with less than 1% of native prairie remaining. Prairie restoration will enhance habitat for a number of grassland wildlife species, including bobwhite quail, grassland songbirds, pollinator

insects such as butterflies, deer, turkey, and other game and non-game wildlife. There are 9 counties in the Black Belt Prairie region of Mississippi that are eligible for this practice: Chickasaw, Clay, Kemper, Lee, Lowndes, Monroe, Noxubee, Oktibbeha, and Pontotoc. There are 2,500 acres available for enrollment in the CP38 – Black Belt Prairie practice in Mississippi. The MDWFP is working with FSA and NRCS to promote and deliver CP33 and CP38. Mississippi State University and the MDWFP are continuing to cooperate to fulfill monitoring requirements for both practices.

Cooperation with Non-Governmental Organizations

The MDWFP continues to cooperate with NGOs to implement wildlife habitat projects. Delta Wildlife, Inc. has established over 600 acres of native warm-season grasses and forbs in the Mississippi Delta and vicinity (includes CRP, CP33 and CP21 conservation covers). Wildlife Mississippi has established over 2,000 acres of native warm-season grasses and forbs in the Black Belt Prairie region of Mississippi. The MDWFP is currently cooperating with Wildlife Mississippi to restore native prairie in Jasper County within the Jackson Prairie region. This will be the first Jackson Prairie restoration project on private land in Mississippi. The MDWFP cooperated with Quail Forever, Golden Triangle Chapter (QF-GT), State Chapter National Wild Turkey Federation (NWTF-MS), and other cooperators to implement a 250-acre pine grassland and old field habitat enhancement project on Noxubee National Wildlife Refuge. Approximately 180 acres of upland pine forest was thinned to 50 square feet basal area per acre, and will be treated with selective herbicide to control hardwood brush. Approximately 70 acres of old fields are being treated to eradicate bahiagrass and tall fescue and release native grasses and forbs. Funding is being provided by QF-GT, NWTF-MS, US Fish and Wildlife Service grants, and BASF, Corporation grants. The MDWFP is providing technical advice on the project.

Small Game Program personnel from the MDWFP continued to participate in the East Gulf Coastal Plain Joint Venture technical committee. Small Game Program personnel from the MDWFP also participated in development of Mississippi's new Prescribed Fire Council (formed in 2007), including service on the inaugural steering committee. Information on Mississippi's Prescribed Fire Council can be found at www.msfirecouncil.org.

The MDWFP Small Game Program coordinates the Mississippi Bobwhite Task Force. This group meets at least once per year and is composed of state, federal, and private agencies and organizations. The Bobwhite Task Force met in November 2008 to discuss implementation strategies for Mississippi's Northern Bobwhite Conservation Initiative plan.

Cooperation with Mississippi State University, Forest and Wildlife Research Center

The MDWFP continues to cooperate with Mississippi State University to monitor bird populations on agricultural fields enrolled in CRP, CP33 – Habitat Buffers for Upland Birds. Although there was variation in bird abundance among the BCRs and control and CP33 sites in both 2006 and 2007, CP33 buffer habitats provided positive benefits to several high priority breeding bird species in both years. Bobwhite abundance at both control and CP33 sites in 2007 was less than abundance measured in 2006. However, bobwhite abundance was more than 1.5 times greater at CP33 sites than control sites in both years (Figure 2).

The MDWFP also funds a cooperative research associate position through Mississippi State University. Previously, this position focused on supporting quail research and management activities. In 2008, responsibilities of this position were expanded to support all aspects of the

MDWFP Small Game Program. Currently, this position is vacant, and a suitable candidate is being sought.

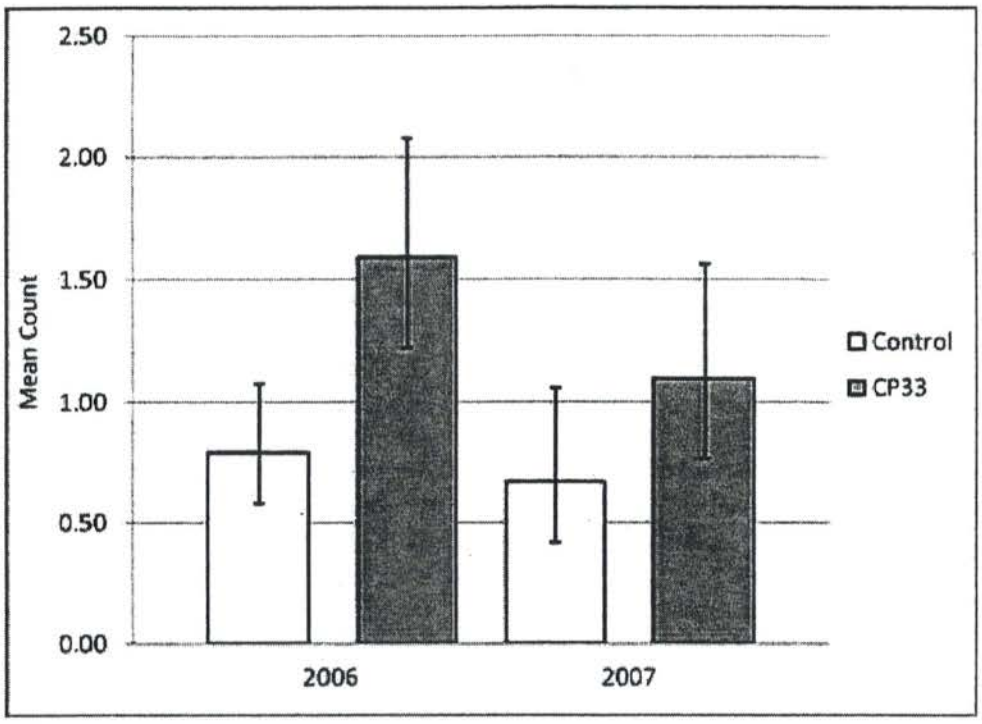


Figure 2. Northern bobwhite breeding season call-count survey results (raw means and 90% CI) for CP33 and non-CP33 sites in Mississippi.

Monitoring and Surveys

During 2007, breeding season quail call counts were conducted on managed tracts across the state (Hell Creek, Hamer, and Marion County WMAs). During the summer of 2008, quail call count surveys will be expanded on public lands to gain more information on bobwhite population trends and relative abundance. This will be especially useful to monitor long-term population changes in response to future management decisions. Past and present data is currently being compiled and summarized.

The MDWFP continues to conduct a volunteer quail hunter survey (wild birds only). During the 2007 – 2008 hunting season, data were received on 130 wild quail hunts representing 55 private land hunts, 75 public land hunts, and 400 hours of hunting. Hunting party size was generally 1 hunter and averaged about 3 hours of hunting. Hunters flushed 0.24 coveys per hour and bagged 0.15 birds per hour. Survey participants again perceived quail populations to be less than the previous season.

Outreach and Education

The MDWFP Small Game Program websites were redesigned in 2007. The quail webpage may be viewed at www.mdwfp.com/quail.

Several popular articles relevant to quail management were published or are currently being developed. An updated version of the publication "Ecology and Management of the

Northern Bobwhite" that details bobwhite life history, habitat requirements, habitat management practices, and harvest management is available online from the MSU Extension Service at msucares.com/pubs/publications/p2179.pdf. A companion video, "Bobwhite Habitat Management in Mississippi," was also converted to DVD and streaming video format. The bobwhite habitat management video may be viewed at www.cfr.msstate.edu/video/ by selecting the "Bobwhite Habitat Management" link in the menu beneath the player. "Native Warm-season Grass Restoration in Mississippi," a guide to establishing native warm-season grasses, was also printed in 2007. This publication is available online from the MSU Extension Service at msucares.com/pubs/publications/p2435.pdf. An article on managing pine plantations to improve habitat for grassland birds was published in the Mississippi Forestry Association publication "Tree Talk." Two technical bulletins to be produced by the MDWFP on supplemental feeding of wild quail and using pen-reared quail for dog training and put and take hunting are also being drafted. Given recent data that shows benefits of supplemental feeding as part of an intensive habitat management program, the supplemental feeding bulletin is designed to provide information on the appropriate use of supplemental feeding and that it is not a substitute for habitat management. Although the MDWFP does not promote releasing quail as a viable method of establishing a sustainable wild quail population, it is acknowledged that some landowners will use pen-reared quail for certain objectives. The pen-reared quail publication is designed to inform those landowners of techniques for the use of pen-raised birds.

The MDWFP Private Lands Habitat Program hosted two early successional habitat field days for USDA-Natural Resources Conservation Service field office personnel in North and Central Mississippi. Small Game Program personnel also participated in these field days. Private Lands Habitat Program and Small Game Program personnel also gave technical presentations on bobwhite quail and prairie restoration at FSA, CRP SAFE training seminars.

The MDWFP continues to support local chapters of Quail Forever and Quail Unlimited. Currently, there are 4 Quail Forever chapters and 2 Quail Unlimited chapters in Mississippi. These chapters serve as valuable grassroots proponents of quail conservation, and the MDWFP is committed to supporting local chapters of these organizations by providing technical guidance on habitat management and other projects.

WILDLIFE HARVEST AND POPULATION STATUS REPORT

NORTHERN BOBWHITE - 2007

Thomas V. Dailey, Resource Scientist

QUAIL ABUNDANCE

Quail roadside surveys were conducted by Conservation Agents and Protection Division volunteers during August 1-15 in 108 of Missouri's 114 counties. Several metropolitan counties are not measured because of high traffic levels (Clay, Jackson, St. Louis and St. Charles counties) and data were missing for Putnam and Schuyler Counties. Surveyors count the number of quail they see while driving 20 M.P.H. along permanent 30-mile gravel road routes. These observations provide an *index* of quail abundance that we assume is representative of quail across the landscape. Because only a small fraction of any one county is sampled, the index best represents quail population trends at regional and statewide scales. The routes are almost entirely through private land, so the quail index is a reflection of conditions on Missouri's private lands.

This year's statewide index of 3.3 quail per route is 10% below last year's count of 3.7, 6% below the average for 2002-06 and 56% below the long-term (1983-2006) average of 7.55 (Table 1). Overall production was poor, with the mean statewide chick count of 1.52 being 23% below the 2006 count. Among zoogeographic regions (Figure 1), however, the quail count varied widely with the index being up in the Northwestern Prairie, Northern Riverbreaks, Western Prairie, Ozark Plateau and Mississippi Lowlands. Regional quail counts were relatively high (>5 quail/route) in the Northwestern Prairie and Northern Riverbreaks; moderate (3 quail/route) in the Northeastern Riverbreaks, Western Prairie, Western Ozark Border and Ozark Plateau; and low (<2 quail/route) in the Northern & Eastern Ozark Border and the Mississippi Lowlands (Table 1).

Weather conditions over the past year might have reduced quail abundance. A series of severe winter storms swept across the state during December 2006 and January 12-14, January 20-21 and February 13, 2007. Freezing rain, sleet, ice and snow fell in many counties, and because of cold weather, the ground was covered for almost a month in many areas. The number of days when the average temperature was below freezing (32 F) beginning January 13 was 28 of 31 days in Columbia, 29 of 31 in Hannibal and 25 of 31 in Springfield. Under these conditions we expect quail to lose body weight, and possibly die from hypothermia, starvation and depredation. Quail populations can recover from winter losses if weather during the nesting season is mild. Nesting conditions were generally good through July, except for drought in the southeast, and a deluge of rain in late June in west-central. Widespread 100°F temperatures in August might have reduced the usual second peak in production, and could have lead to an underestimate of quail abundance in some counties. Because bobwhites use gravel roads (i.e., survey routes) most when dew in vegetation is heavy, fewer quail might have been along survey routes in droughty areas.

Prospects for the 2007 hunting season are best in northwest and north central Missouri, and moderate-to-poor in other parts of the state. The Ozark quail index was close to the long-term mean, so areas with good habitat should hold plenty of birds. Statewide reports of new broods in August and September indicate that production continues. Despite the overall low quail abundance, quail are plentiful on private and public lands with suitable habitat. These areas can have quail at rates as high as 10 coveys per 200 acres.

The low statewide quail index reflects Missouri's widespread poor quail habitat. The list of problems is long and includes over-grazed pastures, overly thick stands of grass in old fields and Conservation Reserve Program fields, natural replacement of woody thickets by large canopied trees, replacement of woody draws by grass waterways, removal of hedgerows, red cedars infesting grasslands and monocultures of crops, grains and forage. There are programs to remedy these problems, including the MDC quail plan, the Northern Bobwhite Conservation Initiative, mid-contract management in the USDA Conservation Reserve Program (CRP), upland buffers in the CRP, and habitat-management organizations such as Quail Unlimited and Pheasants/Quail Forever.

2006 HUNTING SEASON

MDC collects harvest information from a post-season mail survey of a random sample of Missouri small game permit holders to estimate hunting activity at regional and statewide scale. The 2006 season (November 1, 2006 to January 15, 2007) continued the downward trend in quail hunting with record lows in number of hunters and harvest. The number of quail hunters during the 2006 season was 30,119 (Figure 2), a 10% decline from 2005, and 71% below the long-term (1967-2005) average of 103,162 hunters. The harvest of 292,080 was a 16% decline from 2005, and 82% below the long-term average (1967-2005) of 1.6 million. These record lows could be partly due to reduced opportunity caused by weather, including record warmth the second week of the season, a foot of snow on December 1 and ice the last weekend of the season.

Although the numbers of hunters, and consequently, harvest, have declined steadily over the past decade, the remaining hunters still do well with the bag per day being relatively stable since 1996 (Figure 2). The bag per day, a statewide index of hunting success, was 1.59, only 4.3% below the average for the previous 10 years. The 1.59 statewide hunting success index, however, was only 8% higher than the record low hunting success of the 2001 and 2002 seasons.

Regionally, hunting success was relatively high (1.9-2.1 quail bagged/day) in the Western Prairie, Northeastern Riverbreaks and Northern Riverbreaks zoogeographic regions, and fair to poor (1.0-1.5 quail bagged/day) in other regions. Despite poor overall success, hunters in areas with good habitat were finding 5-10 coveys in a day of hunting.

Although quail harvest and hunter numbers have reached record low numbers, the sport still is a major recreational activity with each hunter averaging 6 days in the field and 9.7 quail bagged. Altogether in the 2006 season, quail hunters spent 184,203 days in the field.

TABLE 1. Average number of quail counted per 30-mile route by Conservation Agents along 108, 30-mile routes during August 1-15, 2007.

Zoogeographic Region[1]	Number of routes in 2007	Average Quail Count		
		2007	2006	1983-2006
Northwestern Prairie	11	5.73	5.36	8.17
Northern Riverbreaks	10	5.20	3.27	8.18
Northeastern Riverbreaks	19	3.26	6.40	10.05
Western Prairie	12	3.25	3.17	16.53
Western Ozark Border	13	2.85	3.38	7.23
Ozark Plateau	24	2.92	2.38	2.97
Northern & Eastern Ozark Border	12	1.92	3.33	2.89
Mississippi Lowland	7	1.43	0.43	6.11
STATEWIDE	108	3.30	3.68	7.55

[1]See figure 1.

FIGURE 1. Zoogeographic regions of Missouri.

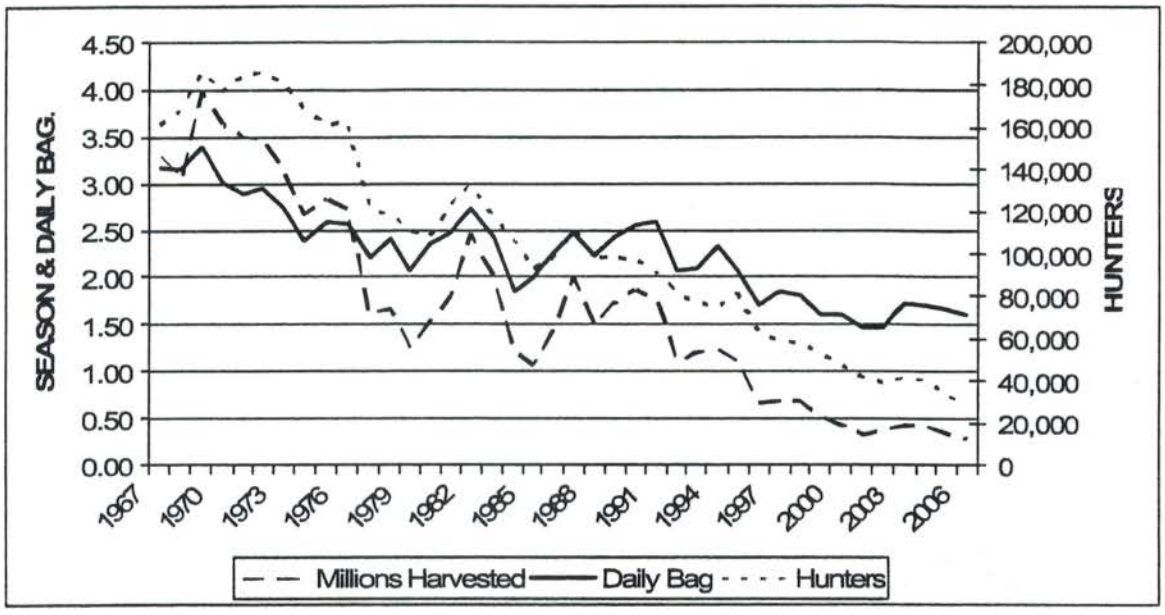


FIGURE 2. Missouri quail hunting trends during 1967 – 2006. During the 2006 season, 30,119 hunters harvested 0.29 million quail (292,080), and the average daily bag was 1.59. During the best year, 1969, 186,019 hunters harvested 3.98 million quail, and the average daily bag was 3.4.

Missouri Department of Conservation

Strategic Guidance for Northern Bobwhite Recovery Annual Report

Dear Conservation Partner,

In May 2003, the Missouri Department of Conservation set into action the Strategic Guidance for Northern Bobwhite Recovery. The goal of the plan is to reverse the downward trend in bobwhite quail abundance and bobwhite-related recreation in Missouri. The plan has and will continue to guide the Department's efforts to increase bobwhite populations statewide and recreation related to bobwhite and grassland wildlife as we work with resource management partners and landowners to restore habitat in Missouri.

We are now entering the fifth year of the quail plan, and I am happy to report we have made significant progress for quail and grassland birds in Missouri. Much of the progress was made possible by strong partnerships and a statewide interest in restoring habitat for quail and grassland birds. The results on both private and public land and regional achievements are impressive, but more work is still needed. Landscape improvement in bobwhite abundance will not be easy. It will take cooperation and strong partnerships from landowners, stakeholders and conservation groups.

The timing is still right to restore habitat for bobwhites. As we enter 2008, we anxiously await the passing of the next Federal Farm Bill. This legislation has and will continue to play a critical role in restoring quail and grassland bird habitats on private lands. National bird conservation plans such as Partners In Flight, North America Bird Conservation Initiative and Northern Bobwhite Conservation Initiative have further emphasized the importance of landscape level habitat improvements for bobwhites and a coordinated effort between all conservation partners.

As you read this report, I hope you are encouraged by the progress Missourians have made for bobwhites. The Missouri Department of Conservation is committed to this plan, and the people and resources of Missouri. I encourage you to do your part and help with the recovery of northern bobwhite and grassland wildlife by contacting your regional Missouri Department of Conservation office more details. Think big, start small, just start!

Sincerely,

John Hoskins

John Hoskins
Director

Missouri Department of Conservation
Strategic Guidance for Northern Bobwhite Recovery Annual Report

Contents **Page Number**

Introduction

In May 2003, Director John Hoskins signed the Strategic Guidance for Northern Bobwhite Recovery for the restoration and enhancement of quail populations in Missouri. The goal of the plan is to reverse the downward trend in bobwhite abundance and bobwhite-related recreation in Missouri. The statewide plan identified four primary goals and was further supported by each region developing a Regional Quail Plan.

While northern bobwhites are the primary focus, the recovery plan will benefit numerous wildlife species, reduce soil and water erosion, improve water quality, and provide greater outdoor recreational opportunities for Missourians. Likewise, other Department initiatives such as the Greater Prairie Chicken Recovery Plan, Comprehensive Wildlife Strategy and Conservation Opportunity Areas are helping restore quail habitat on private and public lands. The Strategic Guidance for Northern Bobwhite Recovery will also help the Department achieve several goals identified within the strategic plan – The Next Generation of Conservation:

- Conserving Plants, Animals and Their Habitats
- Protecting Clean and Healthy Waters
- Promoting Healthy Trees and Forests
- Preserving Missouri's Outdoor Recreation Heritage
- Teaching Missourians About Fish, Forest and Wildlife Resources
- Helping Private Landowners Advance Conservation
- Serving Nature and You on Conservation Areas

The Next Generation of Conservation is the Department's strategic, long-term plan that was developed with stakeholder input from private landowners, farmers, conservation organizations, and rural and urban leaders. The plan will help guide how the Missouri Department of Conservation provides public service to all Missourians that will benefit fish, forest and wildlife in future years. The Strategic Guidance for Northern Bobwhite Recovery is an essential part of this long-term plan.

Missouri's efforts to increase northern bobwhite numbers and other wildlife species with similar habitat needs are a part of a national initiative. The Northern Bobwhite Conservation Initiative (NBCI) was organized to develop population and habitat objectives in each of the 15 Bird Conservation Regions where northern bobwhite occur. The NBCI is a coordinated and cooperative approach for integrating the needs of quail into other bird management plans. Missouri's accomplishments have been recognized nationally. In 2007, the Missouri Department of Conservation was recognized as the winner of the NBCI Group Achievement Award for the Department's effort toward implementation of the NBCI plan and other accomplishments related to Farm Bill programs.

Public Land Accomplishments and Quail Emphasis Areas

As a part of the Strategic Guidance for Northern Bobwhite Recovery, the Department is working to improve quail and grassland bird habitat on conservation areas throughout the state. In fact, the Missouri Department of Conservation completes approximately 70,000 acres of quail-friendly habitat work each year on conservation areas. Each year, Department staff complete approximately 150,000 acres of habitat management on conservation areas. The Department also worked with over 360 permittee farmers by renting 68,000 acres of cropland, hayland and grassland on conservation areas.

Nineteen conservation areas have also been identified as Quail Emphasis Areas (see map). The purpose of these areas is to demonstrate good quail habitat management and to provide a quality quail hunting experience. Quail Emphasis Areas were selected based on existing habitat qualities,

public demand, and size of the area. To better promote Quail Emphasis Areas the Department's Outreach and Education Division has created a Quail Emphasis Area webpage: mdc.mo.gov/hunt/gamebird/qea.htm

The long-term goals for Quail Emphasis Areas are: 1) produce a sustainable population (10 year average) of one bobwhite quail per two acres and 2) if needed, regulate hunting opportunities to maintain the population of one quail per two acres. Quail Emphasis Area staff are monitoring quail and songbird responses to management efforts by conducting spring and fall surveys. Area managers are also using GIS to track habitat types and management on the area. The goal is to better track applied practices and changes in cover over time.

"I had the privilege of hunting a Quail Emphasis Area and another Conservation Area this last January and cannot come close to telling you how happy I was to see the effort taken to improve conditions for quail and small game and to top everything off I found plenty of quail and saw quite a few rabbits. These two properties had what I have always believed it takes to produce quail."
JOHN HEITKAMP

In 2007, an estimated 75,727 acres of quail friendly habitat work was completed on conservation areas. Most of this work was done in old fields, grasslands, prairies, savannas, glades and woodlands. In 2005 and 2006, an estimated 79,000 and 68,100 acres of habitat were improved for quail and grassland birds, respectively.

Department staff are using a variety of management practices to improve habitat conditions on Quail Emphasis Areas and other conservation areas. For example, prescribed fire and strip disking are being used to open bare ground and promote seed producing plants for brooding habitat. Biologists are also using managed grazing to improve brooding cover for quail and grassland birds on some conservation areas. Work teams are planting food plots and overseeding native forbs and legumes in warm-season grass fields to create even more brood cover for quail. We are enhancing woody and shrubby cover by creating brush piles, edge feathering and planting shrubs. Since 2005, the Department has completed a total of 364 miles of edge development and enhancement on conservation areas.

In recent years, the Department has increased natural community restoration efforts on many conservation areas. Wildlife and Forestry Divisions are working together to restore natural communities such as woodlands, savannas and glades on many conservation areas. Restoration involves removing woody vegetation, invasive species and reintroducing prescribed fire. In the future, these restored communities will provide favorable habitat for northern bobwhite.

In Grassland Coalition Focus Areas, work teams are restoring and re-establishing tallgrass prairie and removing trees to create open grasslands to benefit greater prairie chickens and other grassland birds. Habitat accomplishments made for the greater prairie chicken also benefit northern bobwhite. In fact, managers with conservation areas in southwestern Missouri Grassland Coalition Focus Areas have reported quail densities equal to those on many Quail Emphasis Areas.

Biologists at Locust Creek and Davisdale Conservation Areas have been tracking radio-collared quail for two years to determine what types of habitat the birds are using compared to what habitats the biologists felt the birds would use. Information gained from this study has helped biologists better understand the importance of brooding cover and shrubby cover for quail. This information is being shared with other biologists and landowners at training sessions and workshops.

Department Training

In 2007, Department staff participated in workshops and technical sessions devoted to quail management and ecology. These classes provided staff and conservation partners training on how to manage cropland, grassland, early successional habitats, and natural communities for northern bobwhite.

Over 160 Department staff attended four "Quail 201" classes during the summer of 2007. The course provided training on quail habitat requirements, management, budgeting, and how to develop a long-term plan. In 2008, two "Quail 201" courses will be held and a "Quail 301" course will be offered to all Department employees. The "Quail 301" course is a two day class that will cover a variety of topics including: habitat management, research, regulations, and how to market Quail Focus Areas. Since 2004, Department staff have participated in numerous training sessions to expand their knowledge of quail biology and habitat management.

In 2007, Wildlife Division completed field reviews of Thomas Hill Reservoir and Crowley's Ridge Conservation Areas, both are Quail Emphasis Areas. Several reviews are planned for other Quail Emphasis Areas in 2008. The purpose of the review is to evaluate habitat conditions and management for quail on each Quail Emphasis Area. A thorough evaluation of habitat conditions will help area managers and district staff identify and prioritize future management and budget needs to achieve the goal of one bird per two acres by maximizing usable space and where possible, providing ideal habitat conditions.

Private Land Accomplishments and Quail Focus Areas

In 2004, the Department established 46 private land Quail Focus Areas with input from landowners and conservation partners. The purpose of establishing Quail Focus Areas was to show landscape improvement in quail densities and to promote quail and grassland bird conservation.

Quail Focus Areas were identified in areas where landowners were already managing for quail, near conservation areas with good quail habitat, and/or where conservation partners have expressed an interest in quail management. The plan is for Department staff and conservation partners to target all landowners within these focus areas by marketing quail management and then providing technical and financial assistance to interested landowners. In the meantime, staff continue to provide technical and financial assistance to landowners outside of focus areas to help these landowners meet their resource objectives.

Since 2004, several focus areas have got off to a great start. Quail Focus Areas in Andrew, Buchanan, Cass, Caldwell, Carroll, Knox, Lawrence, Saline, Scott, and Wright counties have shown an increase in quail densities. As a result, more landowners are participating in workshops and cost share programs to improve habitat conditions in the focus area. In some focus areas, landowners, conservation partners and Department staff are also monitoring quail densities to determine population densities within the focus area.

Other focus areas in the state are experiencing some success, but a lot depends on landowner interest. Therefore, in late 2007, Department staff from all divisions took a close look at the existing Quail Focus Areas and revised boundaries and locations. As a part of the review, staff have set either a population density or habitat restoration goal for the focus area. Today, most focus areas are between 10,000 and 30,000 acres in size, but some are even larger because of widespread landowner interest and success. To help promote these targeted areas, staff have developed signs that display each focus area's name. Private Land Services staff will be distributing the sign to any active cooperators within a focus area.

Research and Monitoring

Resource Science Division continues to monitor quail and songbird densities on 60 cropfields with CP33 buffers and 60 unbuffered cropfields as a part of the national CP33 monitoring project. Nationwide, CP33 monitoring has shown a positive response by bobwhite and a variable response by priority songbird species in established CP33 habitat buffers around cropfields compared to control (unbuffered) fields. As a part of another study, Resource Science Division is working with the Natural Resource Conservation Service to measure soil erosion in association with the installation of CP33 buffers. Preliminary information suggests that the reduced seeding rates within CP33 buffers adequately protect soil and water resources and provides the bare ground required by quail.

Resource Science Divison and the University of Missouri's Food and Policy Research Institute (FAPRI) completed a farm-level economic analysis of participation in CP-33. Landowners from Ralls, Carroll, and Bates County enrolled in CP-33 participated as panelists for a representative farm. Using real world yields, prices, operational costs, and soil rental rates within a sophisticated computer model, the economics were modeled for a 10 year period through the study. The information produced through the study will be used to demonstrate the cost-benefits of participating in the CP-33 program on a statewide scale.

In the Northwest Region, Department biologists are monitoring quail and songbird densities on CRP fields that have been edge feathered compared to CRP fields with no edge feathering. Preliminary results indicate northern bobwhites, field sparrows, Henslow's sparrows, grasshopper sparrows, dickcissels, and eastern meadowlarks increased on edge feathered fields compared to control fields. Northern bobwhites in particular were nearly four times as abundant during the 2006 summer breeding season on edge feathered sites compared to control fields, but this difference has been negligible during fall covey counts.

Farm Bill Programs

Through a cooperative agreement, the Conservation Reserve Enhancement Program (CREP) was expanded to parts of 79 counties in Missouri. In early December 2007, the Farm Service Agency informed the Conservation Commission that all 20,000 acres receiving a $100 per acre incentive from the Department was allocated. As a part of the CREP program, native vegetation and mid-contract management will be required on most practices.

Currently, 26,500 acres have been enrolled in the CP-33 practice, with 5,500 acres still available. Missouri currently has the third highest allocation in the nation. In recent months the sign-up has slowed due to high grain prices. In 2008, sign up will begin for the CCRP – CP-38 SAFE program which will bring an additional 19,200 acres of quail and grassland bird-friendly habitat to Missouri Some of these acres will be targeted towards greater prairie chicken recovery efforts in Grassland Coalition Focus Areas and sand prairie restoration in southeast Missouri. Both will result in improved quail and grassland bird habitat.

In 2007, Private Land Services worked with the Farm Services Agency and Natural Resource Conservation Service to require mid-contract management on new CP-21, CP-29 and CP-30 contracts over five acres. Mid-contract management previously was not required on these continuous CRP practices. As a result, filter strips and buffers will provide better brooding habitat for quail. The Department's strong partnership with both agencies has helped further enhance these CRP practices for northern bobwhite.

Other Farm Bill programs such as the Wildlife Habitat Incentives Program (WHIP) and Environmental Quality Incentives Program (EQIP) have created a significant amount of quail and grassland bird habitat on private land. Existing WHIP and EQIP contracts accounted for an additional 15,687 acres of quail and grassland bird habitat in 2007, and 37,450 acres in 2006. Both programs have been

instrumental in helping landowners restore natural communities like prairie, glade, woodland and savanna, and to create early successional habitats for quail and other wildlife species on both recreational and working lands.

The Natural Resource Conservation Service has reported that six counties in the Missouri Bootheel, which are in Conservation Security Program (CSP) watersheds, have established over ten million linear feet of native grass and forbs field borders. To date, Missouri has had wildlife success with CSP, which no other state appears to be able to match. In fact, Scott County is likely the first county in the nation to reach habitat goals identified within the NBCI plan. Most of this work may not have been completed if it was not for interested landowners and the strong partnership between the Missouri Department of Conservation, Farm Service Agency and Natural Resource Conservation Service.

In 2007, farmers, quail hunters and Conservation Agent Roadside Surveys reported a significant increase in quail numbers in the Southeast Region. In fact, southeast Missouri quail hunters have reported seeing more than one covey per hour. In other parts of the state, landowners participating in CSP and other conservation programs have seen an increase in quail as a result of the habitat work they have done.

"While hunting near New Madrid on the last Sunday of the season, we made it a point to hunt only the fence rows that had an adjacent strip of soybeans or corn. We made 5 stops and found 6 coveys in about 4 1/2 hours. I haven't done that in 15 or 20 years. The programs are working, now it is just a matter of time."
BUCK HUNTER

Private Land Achievements

In 2007, the Department and conservation partners continued to assist landowners with land enrolled in CRP to further enhance and improve these grasslands for northern bobwhite. The Department of Conservation and Missouri Association of Soil and Water Districts completed work on a 4-year cooperative agreement called "CRP-BOB". The program provided $240,000 in cost share to enhance CRP grasslands and buffers for quail by providing cost share to landowners interested in edge feathering, planting food plots, controlling invasive vegetation, prescribed burning, light disking or spraying. As part of the CRP-BOB contract, landowners agreed to complete mid-contract management such as light disking, prescribed burning or herbicide applications to enhance CRP grasslands which further enhanced CRP grasslands for quail.

In early 2007, Quail Unlimited received funds through a National Fish and Wildlife Foundation grant. The grant provided an additional $56,300 in cost share to landowners in targeted counties to enhance existing CRP grasslands and adjacent woody edges for northern bobwhite. Most of the cost share funds went towards edge feathering and brooding cover enhancement. The same grant provided $40,000 in cost share funds in 2005 and 2006 to Missouri landowners. These funds were used to create demonstration farms within each region and to enhance brooding and shrubby cover around CRP fields.

Through the Missouri Department of Conservation Landowner Cost Share Program over $1 million was allocated to Missouri landowners in 2007. Approximately $496,190 funded quail and grassland bird friendly practices, which impacted 5,851 acres. In 2006, over $1 million in cost share funds was also made available to landowners, with approximately $614,617 funding quail friendly practices which impacted 7,947 acres. Cost share dollars were commonly used to enhance nesting and brooding cover and to create shrubby cover for northern bobwhite.

Through cooperative agreements with Quail Forever and Quail Unlimited, an additional $200,000 in cost share funds was provided to Missouri landowners in 2007. Through a 50:50 match with the Department, this money has helped restore or maintain over 1,000 acres of quail and grassland bird habitat. Private Land Conservationists and other biologists have used these funds to enhance nesting and brooding cover and to create shrubby cover for quail.

Other partnerships and cost share programs have also benefited northern bobwhite in Missouri. The National Wild Turkey Federation Superfund Grant program has provided critical funding for native warm-season grass drills, herbicide, seed, or to hire habitat contractors for both private and public land projects. Superfund grants will benefit wild turkey, as well as quail and other species. The U.S. Fish and Wildlife Service's, "Partners Program" is also helping restore habitat such as woodlands, savanna, prairie and glades for threatened or endangered species on private land. Through this cost share program, habitat work completed for threatened or endangered species will also benefit quail and other species.

"After only a few quick years with your hands on activity and outlined programs we have made a very positive turn around. Your covey headquarters approach along with edge feathering, soil tests, and converting to warm-season grasses and beautiful wildflowers have all created an environment the quail are falling in love with. Four years ago I did not hear or see any quail. Today, I guesstimate we have 6 coveys and growing."
RON & PAT SKEEN
FRANKLIN COUNTY

In late 2007, the Department of Conservation accepted applications for the Early Successional Habitat Challenge Grant. Through this program, the Department will provide $190,000 to organizations like Quail Forever, Quail Unlimited and the National Wild Turkey Federation. With matching funds from each organization, the program will provide approximately $380,000 in cost share to Missouri landowners interested in creating early successional and natural community habitats that will benefit northern bobwhite.

In northeast Missouri, the Private Land Services Division has worked with Quail Unlimited and Quail Forever to hire biologists to assist private landowners. The Quail Forever biologist, Chris Lee, is located in Clark County, and the Quail Unlimited biologist, Corinne Mann, is located in Monroe County. Both positions have been critical in marketing and developing Quail Focus Areas and assisting landowners interested in quail management. For three years, the West Central Missouri Quail Unlimited Chapter has supported a Private Land Biologist position to help landowners in Cass County. This cooperative position has played a significant role in the wide spread habitat restoration efforts in Cass County, which received national recognition for their achievements.

In 2007, landowner success stories from around the state show that individuals are restoring wild northern bobwhite populations on their property. In some cases, landowners have seen almost instant success while others have taken two or three years to see a measurable increase in coveys – nonetheless a success. Recent landowner success stories are being shared with others, and many of the stories have appeared in the Conservationist, Covey Headquarter Newsletter and other media outlets. Keep your eyes open for more in 2008!

Reaching out to Missourians

In 2004, a Quail and Grassland Bird Leadership Council was formed to increase awareness and support for quail and grassland bird recovery efforts. The council meets periodically, and in 2007 the group met twice to hear reports on recent accomplishments related to the quail plan and to

discuss ways to further promote quail and grassland bird conservation on private and public lands. Council members also participated in "Quail 201" and other workshops to learn more about quail management and to show their support for the quail plan. The council, representing various groups and organizations, played a role in the creation of the youth quail and pheasant seasons, helped increased public and private land management efforts, helped develop training programs for Department staff and conservation partners, and provided recommendations to USDA on the CP33 and CP38 programs.

In 2006, Quail Unlimited and Quail Forever each received five lifetime hunting and fishing permits from the Missouri Conservation Heritage Foundation. Both organizations have raffled or given away the permits to ten youth at local banquets and special events. Congratulations to these ten lucky youth.

In June 2007, twenty-five high school students participated in the Quail Academy at the University of Central Missouri in Warrensburg. Sponsored by Quail Unlimited, the week long course provides high school students a unique opportunity to learn about quail and grassland birds, leadership skills, hunter safety, sporting clays, and a great chance to have fun. Department biologists assisted with the academy by providing field trips and presentations.

In 2007, numerous landowner workshops, field days and outdoor events were held to promote quail conservation efforts. Several workshops and meetings were held in Quail Focus Areas to encourage greater landowner participation. In many cases, Department staff worked with county Soil and Water Districts, Missouri Cattlemen's Association Chapters, Natural Resource Conservation Service, Farm Service Agency, Quail Unlimited and Quail Forever to host workshops and field days.
The Department continues to work with agriculture and commodity groups to further develop partnerships and to promote Department initiatives such as the quail and greater prairie chicken plans. The Department's interaction with commodity and farming groups has been critical to the success in promoting conservation efforts. In recent months, Private Land Services has participated in the following conferences:

- 2007 Missouri Livestock Symposium
- Farm Bureau Annual Conference
- Governor's Conference on Agriculture
- Heart of America Grazing Conference
- Missouri Agribusiness Association Legislative Conference
- Missouri Association of Soil and Water Conservation Districts Annual Training Conference
- Missouri Cattle Industry Annual Convention
- Missouri Pork Expo

For the second year, the University of Missouri, Department of Conservation, and the Missouri Soybean Association hosted a bobwhite quail and agriculture field day at the Bradford Farm Research and Extension Center in Columbia. Over 100 people attended the field day this past year. In recent years, over 5,000 people have participated in educational programs and field days at Bradford Farm including landowners, agribusiness, governmental agencies, Future Farmers of America Chapters, and other youth groups. Quail and grassland bird management and monitoring are an important part of the educational goals of Bradford Farm.

The Missouri Department of Conservation continues to promote upland game hunting by hosting special hunts for youth or women on licensed game bird shooting preserves. Staff from Outreach and Education, Protection, and Private Land Services Divisions hosted many of these events in 2007. These special events provided novice and experienced hunters an opportunity to learn more about upland game hunting, hunter safety and the basic habitat requirements of northern bobwhite.

Outreach and Marketing

The Missouri Department of Conservation staff continue to promote and market quail and grassland bird conservation and landowner success stories with the help from the Outreach and Education Division. In 2007, several landowner success stories were received from Department staff and landowners. Many of these stories have appeared in the Conservationist, the Covey Headquarters Newsletter, and 2008 Quail Events Calendar. Department staff and landowners continue to send in more success stories. The Missouri Department of Conservation and many partners continue to promote quail and grassland bird conservation efforts. Here are just a few examples of recent marketing efforts:

- The Covey Headquarters Newsletter
- Missouri Conservationist – nearly every issue over the past year has included quail habitat hints or landowner success stories
- Youth Quail and Pheasant Season advertisement
- MDC website revisions and new additions related to quail
- Creation of Quail Emphasis Area webpage
- Landowner success stories and frequent articles in Quail Unlimited and Quail Forever magazines
- Quail related articles in the Missouri Ruralist, Progressive Farmer, MFA 2008 Agronomy Guide, NRCS website, and MDC website
- Landowner field days and workshops
- Missouri Quail Unlimited – Quail Academy
- Quail Events Calendar – over 10,000 distributed in 2007 and 2008
- Missouri Department of Conservation, "Private Land Care" video series
- Quail Placemats distributed to cafes and banquets
- A new "Quail Friendly Plants of Missouri" book will be available in 2008. The book was developed by the Department and University of Missouri Extension Service
- "Quail Talking Points" for Conservation Agent radio shows

Regional Highlights

A key element of the state recovery plan was the development of Regional Quail Plans. In 2004, Department staff in each region created goals and objectives to restore quail and grassland bird habitat on private and public land. Department staff have been working with landowners and farmers to improve quail habitat on recreational and working farms. Field staff have also increased public land management efforts on Conservation Areas throughout the state. Another key component has been developing regional workshops and field days to promote quail and grassland bird habitat management and outdoor recreation related to quail conservation. It will ultimately be local and regional efforts that restore bobwhite habitat at a landscape level.

Central Region

Central Region Quail Emphasis Areas

Regional staff at Whetstone Creek, Davisdale and Lamine River Conservation Areas have increased efforts to improve early successional and natural community habitats for quail and other wildlife by eradicating invasive vegetation, reducing woody encroachment in old fields, woodlands and savannas, conducting landscape-level prescribed burns, and creating shrubby and woody cover for quail. Efforts to restore and manage natural communities and early successional habitats on Quail Emphasis Areas and many other conservation areas in the central region have resulted in good quail densities.

New Partnerships Benefit Landowners and Quail

Quail Forever and Quail Unlimited have started new chapters in central Missouri to the benefit of landowners and quail. Both organizations are providing cost share funds to landowners and helping spread the word about quail habitat management by hosting annual banquets and workshops.

The new Four Rivers Chapter of Quail Forever held their first banquet in February 2008 in Westphalia. The Ozark Border Quail Unlimited Chapter, which covers parts of Gasconade and Franklin Counties, hosted annual banquets in 2007 and 2008. This new and very active chapter also held a landowner workshop in May 2007 at Arvil and Doug Kappelmann's farm in Gasconade County. The tour attracted over 50 people interested in quail management. Department staff led the tour and were available to answer questions about quail management and cost share programs.

The Calamity Covey and Moreau Valley Quail Forever Chapters hosted a ladies pheasant hunt in September 2007 at a central Missouri game bird hunting preserve. Department staff were on hand to assist with the workshop. Over 20 ladies attended the event which included gun safety, dog training, habitat management, and an opportunity for each lady to pheasant hunt. This was the first chance for many of the participants to harvest a pheasant. The group and the Department have scheduled a youth hunt for March 2008.

Gasconade County Landowners Receive Adopt-A-Covey Award... Two Years in a Row!

In 2006 and 2007, two Gasconade County landowners received the Quail Unlimited, Great Plains Region, Adopt-A-Covey award for their efforts to restore bobwhite habitat. In 2006, Jerry and Chris Lairmore received the award. In 2007, Arvil and Doug Kappelmann were recognized. Both landowners have made their properties more quail friendly by establishing native grasses and wildflowers, edge feathering, planting food plots, planting shrub thickets, and restoring glades and woodlands.

Sweet Springs Quail Focus Area Landowner Workshop

On October 26, Department staff held a quail management workshop for 24 landowners in the Sweet Springs Quail Focus Area with help from local Quail Unlimited and Quail Forever chapters. The workshop started before sunrise with a fall whistle count survey to estimate quail densities on the demonstration farm owned by Doug Vogelsmeier. Doug has completed several habitat practices on his farm with the help of Private Land Conservationist Brent Vandeloecht and cost share funds from the National Fish and Wildlife Grant awarded to Quail Unlimited.

After the fall covey count survey, the group was treated to several informative presentations by Travis Dinsdale, Steven Noll, Brent Vandeloecht, and Susan Troxel-DeWitt on quail ecology and habitat management. The workshop also included a tour of the demonstration farm where Department staff pointed out examples of nesting, brooding, and shrubby cover for quail. That afternoon, the Saline County Cattlemen's Association provided a hearty lunch for the group while Department staff provided additional information on the Sweet Springs Quail Focus Area and available cost share programs.

Moniteau County Summer Prescribed Burn Workshop

On August 2, Private Land Conservationist, Doug Bensman, Resource Forester, Mike Morris, and Wildlife Biologist, Frank Drummond conducted a prescribed burn workshop in Moniteau County. About 12 landowners, Natural Resource Conservation Service and Soil and Water District personnel attended the workshop. The workshop involved a morning classroom session, followed by an afternoon trip to the Daryl Raithels farm where burn equipment was displayed, and a demonstration prescribed burn was conducted by Department staff. Biologists are promoting summer prescribed burns as one way to improve rank warm-season grass fields for bobwhite quail.

Mid-Missouri Conservation Appreciation Day - Fun in the Field
On September 22, Department staff partnered with the Moreau Valley Quail Forever Chapter and Moniteau Monarchs National Wild Turkey Federation Chapter to co-sponsor the Mid-Missouri Conservation Appreciation Day which was graciously hosted by landowner, Two Guys With A Pond, LLC. The event focused on outdoor fun and education with an emphasis on quail habitat management. About 140 attendees participated in the all day outing which included a habitat management tour of the farm. Two Guys With A Pond, LLC have completed numerous habitat practices including woodland, glade and prairie restoration, CP-33 field borders, food plots, edge feathering, shrub plantings, and timber stand improvement. Demonstrations scheduled during the day included upland dog training, electro-fishing, furbearer trapping, and wild game cooking. Other activities encouraged archery, trap shooting, a virtual shooting simulator, catch and release fishing, antler scoring, a fur display and a display of Department lands in the Central Region. Lunch was also provided and Ralph Duren entertained the crowd. Drawings for a youth turkey, quail, and deer hunt gave three youngsters an outdoor experience to enjoy.

Kansas City Region

Platte River Falls Conservation Area Field Day
Chris Blunk, Paul Lowry, Andy Carmak, Brian Gilbert, and Jake Allman hosted a field day at Platte Falls Conservation Area on October 13. Twenty-five landowners attended the workshop to learn about biology and management of deer and turkey, timber and pond management, and of course a heavy emphasis on quail and upland habitat restoration. Several organizations provided support for the event including the Greater Kansas City Quality Deer Management Association, Platte County Longspurs National Wild Turkey Federation, and Kansas City Quail Unlimited Chapter.

Greater Prairie Chickens Management and Conservation Opportunity Areas Benefit Quail
Recent conservation efforts within the Cole Camp/Hi Lonesome Conservation Opportunity Area have made significant improvements for quail and grassland bird habitat. In 2007, Department staff and conservation partners worked to control woody and invasive vegetation, reestablish prairie, and conduct prescribed burns and managed grazing on private and public lands to benefit greater prairie chickens, quail, and other grassland birds. In fact, bird surveys at Hi Lonesome Prairie Conservation Area have shown a positive response by many grassland bird species, including quail, to recent management efforts. The Missouri Department of Conservation has also partnered with Audubon Missouri and the City of Cole Camp to hire Korey Wolfe as a community-based conservationist. Korey has been working with the City of Cole Camp and landowners within the Cole Camp/Hi Lonesome Conservation Opportunity Area to promote grassland conservation and outdoor recreational around Cole Camp.

Kansas City and Southwest Region Staff Help Out With Cherokee Plains Quail Forever's First Youth Bird Hunt
Staff from the Kansas City and Southwest Regions gathered on October 20 to assist with a youth upland bird hunting clinic sponsored by the Cherokee Plains Chapter of Quail Forever. The event taught ten area youth about game bird biology, hunting tips, hunting with dogs, shooting techniques, and game care and cooking. All the kids and their parents had a great time, as did the volunteers. Department staff participating included Derek Farwell, Lana Wilson, Chris Daniel, Jeremy Swope, and Eric Calvert, Zeb Jordan, and Scott Sudkamp.

Quail Unlimited National Convention – Repeat!
In 2006 and 2007, Quail Unlimited held their national convention and trade show in the Kansas City area. Both years the convention included habitat tours, equipment demonstrations, habitat

workshops, and hunting seminars. In 2008 the event will be held in Springfield, Missouri. Department staff helped with workshops, seminars and trade show.

Ninth Annual Landowner Night in Garden City

The West Central Quail Unlimited Chapter hosted their Ninth Annual Landowner Night in Garden City on November 13. Fifty people attended the annual event to learn about the different cost share programs they can use to restore quail habitat on their property. Local staff from the Farm Service Agency, Natural Resource Conservation Service, Department of Conservation, Department of Natural Resources, and Quail Unlimited gave presentations and answered questions. Many of the attendees own property in the Cass County Focus Area, which continues to be one of the most active and successful focus areas in the state as a result of energetic staff and conservation partners. The West Central Chapter of Quail Unlimited regularly hosts workshops, hosts an annual banquet, and other special events. Funds raised by the chapter will be matched by the Department of Conservation and offered to landowners interested in quail management as cost share.

"40 years ago, on this farm there were 6 coveys of birds, and now there are only 2 coveys before I started habitat restoration. After completing some buffers and edge feathering last year, I am now holding 4 coveys again in the quality habitat!" "I am excited to do my part to restore quail numbers on my farm back to the 'Glory Days!!'"

RICHARD CAVANNAH

Northeast Region

Conservation Reserve Enhancement Program Benefits Landowners and Quail in Northeast Region

The Conservation Reserve Enhancement Program (CREP) has been a huge success for landowners in the Northeast Region. Over 7,000 acres have been enrolled in the region with most located in Macon, Monroe, and Randolph Counties. Department biologists have worked closely with the Natural Resource Conservation Service and Farm Service Agency by providing technical assistance to landowners enrolled in the program. Of the acres enrolled, nearly half were enrolled as CP-33 field borders, which requires shrubby cover and mid-contract management specifically for quail habitat.

Successful Youth Hunt is a Blast for Kids

The Ten Rivers Pheasants Forever Chapter youth hunt gave 14 kids the opportunity to bag pheasants at a local game bird hunting preserve. The day started with a gun safety course and a round of sporting clays. Department staff and members from Pheasant Forever and Quail Forever helped with the field day and hunt. The day was a success as several young hunters harvested their first pheasant – something they will always remember.

Northeast Region Quail Focus Areas

On August 8, 2007, the second annual meeting was held for the Knox County Quail Focus Area. Twenty people attended the event which featured a cookout and habitat tour led by Department staff. A four member landowner advisory committee was reappointed by the landowners in attendance to work with the Department on future conservation efforts. One-third of the landowners in the Quail Focus area are actively cooperating with the Department to restore quail habitat on their properties.

In Monroe County, landowners in the Paris Quail Focus Area continue to restore and manage habitat for quail. Landowners in the focus area, like Donald Simpson, are working with Private Land Conservationist, Jamie Ebbesmeyer and Quail Unlimited Biologist, Corinne Mann to improve habitat, hold focus area meetings and workshops. Jamie, Corrine and several landowners are working together to conduct spring and fall quail counts to monitor quail densities in the focus area. The

Mark Twain Chapter of Quail Unlimited has played a key role in the success of this focus area by hosting banquets and workshops.

Northeast Region Public Land Management Highlights

In 2007, Wildlife and Forestry Division staff worked to restore natural communities such as woodland and savannas on several conservation areas. Area managers continue to concentrate their habitat work on several conservation areas located in Conservation Opportunity Areas and on the two Quail Emphasis Areas in the region – Henry Sever and Thomas Hill Reservoir Conservation Areas. Like many other regions, Northeast Region staff are improving early successional habitats by strip disking, reducing woody encroachment, prescribed burning and controlling invasive vegetation. For example, staff worked hard to complete edge feathering, shrub planting and fescue eradication projects at Henry Sever Conservation Area. As a result of good weather, staff were also able to complete several large prescribed burns. Most notably was a large woodland and savanna prescribed burn on Union Ridge Conservation Area.

Landowner Accomplishments in the Mystic Focus Area Helps Grassland Wildlife

Conservation partners and landowners in the Mystic Focus Area in southwest Adair and southeast Sullivan Counties remain committed to restoring grassland habitat to benefit greater prairie chickens and grassland birds. One reason for the interest has been the partnerships between the U.S. Fish and Wildlife Service, Farm Service Agency, Natural Resource Conservation Service, National Wild Turkey Federation, Missouri Prairie Foundation, Soil and Water Conservation Districts, and Missouri Department of Conservation. These agencies are working together to promote grassland conservation on private land by providing cost share funds, technical assistance, and rental equipment which has helped restore hundreds of acres of open grassland habitat for greater prairie chickens. For example, one landowner, working with Missouri Prairie Foundation and Department of Conservation, has rested over 80 acres of rich native prairie in exchange for hay. With further assistance, he intends to incorporate prescribed fire on these acres. On another farm, a landowner is restoring hundreds of acres of diverse prairie through a unique partnership with state and federal agencies, Missouri Prairie Foundation, and Premium Standard Farms. The landowner will be using cost share funds from the Wildlife Habitat Incentives Program (WHIP) to complete the habitat work.

Northwest Region

Covey Headquarters Focus Area in Dekalb and Andrew Counties: Home of National Award Winners and the Covey Headquarter Newsletter!

The partnership with the St. Joseph Heartland Chapter of Quail Unlimited continued to be strong and productive in 2007. The Heartland Chapter was awarded the Quail Unlimited National Habitat Award for the second straight year at the Quail Unlimited National Convention in July 2007. With the help of the local Quail Unlimited Chapter, Private Land Conservationist Jeff Powelson worked with 40 landowners to apply prescribed fire to over 2,500 acres of CRP and other grasslands. Quail Unlimited volunteers assisted with several of the prescribed burns.

The Heartland Chapter and the Department also hosted a youth quail hunt. The Quail Unlimited chapter supplied volunteers, food, and a farm to host the event and the Missouri Department of Conservation provided guns, ammunition, and personnel to supervise shooting events. The youth were also treated to a short course on quail biology.

Jeff Powelson, Area Biologist Travis Dinsdale, and University of Missouri Outreach and Extension Specialist Greg Humphrey continue to collaborate on the production of the quarterly Covey Headquarters Newsletter which has grown over the years to a subscription list of nearly 10,000. The Covey Headquarters Newsletter provides landowners and upland hunters the latest information

on habitat management, monitoring efforts, and landowner success stories. The newsletter is free to all subscribers.

Landowners in 2C Focus Area Improve CRP Acres for Quail

In 2007, cost share programs such as CRP-BOB helped numerous landowners in the focus area improve existing CRP grasslands for quail. For example, the cost share program was utilized by 30 landowners to conduct prescribed burns on 1,065 acres, plant 91 acres of food plots, complete 4.1 acres of edge feathering, and eradicate 25 acres of sericea lespedeza. These habitat accomplishments complement a very successful 2006 where CRP-BOB was employed to help 24 landowners burn 1,208 acres, plant 101 acres of food plots, establish eight acres of downed woody cover, and eradicate 60 acres of sericea lespedeza. Twenty-six landowners have enrolled in CRP-BOB for 2008 and should show comparable accomplishments in the upcoming year. To date, Department staffs have developed management plans on 290 tracts within the focus area totaling 44,925 acres! The results more than speak for themselves with some landowners and hunters within the focus area reporting close to one covey per hunting hour.

Youth Hunt in the 2C Focus Area

On the outreach front, a youth pheasant hunt event was conducted on private land within the focus area in cooperation with Northwest Region Protection Division staff. The event was very successful with 25 youth in attendance. During the event the young boys and girls learned about quail and grassland bird habitat, hunted live birds over bird dogs, shot trap, and learned a little about muzzleloaders and turkey hunting.

Seat Conservation Area and Quail Focus Areas

The Emmitt and Leah Seat Conservation Area encompasses 3,500 acres and is complemented by the Seat and Albany Quail Focus Areas, which consists of 15,000 acres of the surrounding landscape in Worth and Gentry Counties. Since 2004, considerable habitat improvements have been made on the Seat Conservation Area when the area was designated as a Quail Emphasis Area. Since 2004, over 300 acres of cool-season grass have been converted to native grasses and wildflowers. Work teams have also completed 3.5 miles of edge feathering, 14 miles of edge enhancement, and 2,500 acres of prescribed burns on the conservation area. A demonstration site has been designated on the area showcasing a variety of management techniques. Quail and grassland bird monitoring sites have been established on both private and public land within the Quail Focus Areas to determine the effectiveness of habitat management.

Since 2004, 13 private landowners within the Seat and Albany Quail Focus Areas have been working together to restore quail habitat. Beyond improving habitat, landowners within the focus area have shared their success by hosting two landowner workshops and a youth dove clinic and field trip. Marketing efforts have included distribution of caps, quail management CD's, quail calendars, and articles for local Soil and Water Conservation District newsletters. Farm Service Agency, Natural Resource Conservation Service, and Soil and Water Conservation District staffs have also helped promote quail management, cost share programs and have been instrumental to the success of the Seat and Albany Quail Focus Areas.

Grassland Evaluation Contest Includes "Quail Habitat" Test

Private Land Conservationist Steve Fisher helped coordinate the annual Northwest Region Grassland Evaluation Contest for Future Farmers of America (FFA) with about 60 participants in attendance. One of the four contest sections is the "Wildlife" part, where participant are challenged with evaluating an area specifically for quail habitat. The contest requires students to make decisions about grassland management that would directly improve limiting factors for quail and other early

successional species. For several years, the Missouri Department of Conservation has assisted with both the regional and state grassland evaluation contests.

Strong Partnerships

The Quail Forever Short Grass Chapter of Livingston County organized in November 2007 and hit the ground running with its first fundraising banquet in December. The chapter is off to an ambitious start by participating in the recent Livingston County North Missouri Outdoor Classic Sport Show and is already laying plans for a landowner workshop in March 2008. The primary focus of the chapter is youth education and habitat restoration.

The Missouri Department of Conservation partnered with the Northwest Pheasants Forever Chapter to conduct a quail habitat field day on Roger Faber's farm in Holt County. The event was very successful with 40 people in attendance. The field day resulted in several productive contacts and on-site visits for Private Land Conservationist Jim Pierson.

Regional Work Teams Focus on Public Land Management

In recent years, Department work teams have increased early successional and natural community work on many conservation areas in the Northwest Region. In fact, a significant amount of work has been completed on the five Quail Emphasis Areas in the region. For example, just this last year, over 50 acres of cool-season grass were converted to native grasses and wildflowers at Bonanza Conservation Area. At Bunch Hollow Conservation Area, almost ten miles of edge feathering has been completed by Department work teams and hired habitat contractors since 2004. Staff are also improving quail and grassland bird habitat on other conservation areas in the region. For example, at Pony Express Conservation Area, Wildlife Division staff planted acres of sunflower fields for the managed dove hunts on the area and were also able to complete over 200 acres of summer prescribed burns to control woody vegetation and improve early successional habitat on the area.

Grand River Grasslands Conservation Opportunity Area

Private Land Conservationist Kendall Coleman has worked with 13 cooperators within the Grand River Grasslands Focus Area representing 10,000 acres of privately owned land in this important geography. The focus area received $45,000 in cost share funds from the U.S. Fish and Wildlife Service Bi-State Grant and $12,000 from the Missouri Department of Conservation for resource improvements on private land. These funds will be used to reduce woody encroachment on 165 acres and convert 70 acres of cool-season grass to native warm-season grasses and wildflowers. Projects are currently in various stages of completion.

On the outreach and education front, Kendall and other Department staff met with the Harrison County Cattlemen's Association on three different occasions: one meeting to present general biology information on greater prairie chickens, one to discuss patch burn grazing concepts, and lastly, a prescribed burn workshop. A focus group meeting was also conducted at Eagleville, Missouri to discuss opportunities and strategies related to managing habitat for grassland birds on private land. Invitations were also mailed to area farmers to sit in the viewing blind at Dunn Ranch and observe booming prairie chickens. Five landowners took advantage of this unique opportunity. Department staff and the Harrison County Cattlemen's Association hope their efforts will result in better grassland management for cattle, prairie chickens, and quail.

Wildlife, Private Land Services, and Resource Science Division staff began trapping and radio tagging chickens within the focus area in preparation for an upcoming nesting study. So far, 21 birds (15 females, 6 males) have been trapped and fitted with radio collars. The birds will be tracked throughout the upcoming year so biologists can learn more about these extraordinary birds.

Ozark Region

Natural Community Restoration with Quail in Mind

In 2007, staff at the White River Trace Conservation Area in Dent County completed over 100 acres of woodland thinning. The goal is to restore an oak woodland community with a rich understory of native grasses, forbs, and legumes. The process involves thinning the overstocked trees and then reintroducing prescribed fire to further enhance the woodland community for quail and other woodland wildlife. Staff have already noticed quail and other wildlife using the area. The White River Trace Conservation Area is one of two Quail Emphasis Areas in the Ozark Region. The other is Cover Prairie Conservation Area in Howell County. Both areas support good quail populations and are popular destinations for upland game hunters.

Quail Forever Comes to the Ozarks in 2007

Two chapters of Quail Forever were started in the Ozark Region during 2007 with both hitting the ground running. The Ozark Hills Chapter, serving Dent and Phelps Counties, hosted a trap and skeet shoot at the Rolla Gun Club in June 2007. Approximately 25 people came out to improve their shooting skills and learn about what they can do to improve quail habitat on their properties. The Piney River Chapter, serving Texas and Wright Counties, hosted a youth hunt that attracted 19 kids. Department staff from Protection, Private Land Services, Forestry, and Wildlife Divisions assisted with the hunt as did members from the local chapter of the National Wild Turkey Federation. Both Quail Forever chapters hosted their first banquets and will be providing funds to be matched by the Missouri Department of Conservation for habitat improvements on private lands during 2008.

Wright County Quail Focus Areas

Conservation Agent Keith Wollard and Private Land Conservationist Lesly Holt continued to work with landowners in the Wright County Quail Focus Area. This focus area was created in 2004 and has been growing ever since. In fact, landowners in the focus area were highlighted in the July 2006 Missouri Conservationist for their efforts to restore early successional and natural communities for bobwhite quail. Landowners have converted hundreds of acres of cool-season grass pasture to native warm-season grasses and wildflowers to the benefit of quail and cattle! Keith and Lesly have also provided landowners technical and financial assistance to restore natural communities, conducted prescribed burns, edge feathering, and plant native shrubs. Much of the work completed would not have been possible if it were not for several agencies working together. As a result of the Wright County Quail Focus Area, a unique partnership was formed between the Missouri Department of Conservation, Soil and Water Conservation District, Natural Resource Conservation Service, National Wild Turkey Federation, Missouri Conservation Heritage Foundation, and National Fish and Wildlife Foundation. Landowners in the focus area have seen a positive response in quail densities in a short amount of time due to the habitat improvements landowners have made.

Howell County Focus Area

In Howell County, Private Land Conservationist Brad McKee has been working with landowners to restore open woodland communities and convert cool-season grasses to natives. For example, Mark and Kim Dake have restored several hundred acres of open woodland and converted over 70 acres of cool-season grass pasture to a diverse mix of native grasses and wildflowers with technical and financial assistance from the Missouri Department of Conservation, U.S. Fish and Wildlife Service, and Natural Resource Conservation Service. As a result, the Dake's are seeing more wildlife on their farm than ever before, and their cattle now have a reliable source of summer forage. For the past

two years, U.S. Fish and Wildlife Service staff have been conducting summer bird surveys on Mark and Kim Dake's farm and have found that quail and field sparrow densities have doubled since they started their habitat work.

Saint Louis Region

An Up-and-Coming Quail Focus Area

Private Land Conservationist Jeff Esely held a quail habitat farm tour in the Lincoln County Quail Focus Area in 2007. The Pike County Quail Unlimited Chapter provided lunch and wagons for the tour. The tour was held at the focus area demonstration farm which was developed to showcase good quail management. Approximately 55 people attended the event, with several from the focus area. Follow-up letters were mailed to each participant so hopefully the event will lead to measurable habitat improvements within the Quail Focus Area.

Work in Progress

Department staff have been busy restoring quail and grassland bird habitat on the White Conservation Area in Lincoln County. Wildlife Division staff have been reducing woody encroachment in old fields and restoring open woodlands and savannas. Biologists are also planning to convert several acres of old fields to native warm-season grasses and wildflowers. The long-term goal is to introduce cattle two or three years after the grass is established to create favorable nesting and brooding cover for quail and grassland birds on this Quail Emphasis Area.

"This quail program we have in place has made our goals a reality and we have only just begun! The quail program is a very versatile tool for all your wildlife so do not waist any more time, every little thing you do will help."
DUSTIN CHASTEEN,
FRANKLIN COUNTY MISSOURI

Southeast Region

Southeast Region Updates Regional Quail Plan to Show Benefits of USDA Programs.

In 2007, staff updated the Southeast Region Quail Plan to reflect the positive benefits of the Conservation Security Program (CSP) and CRP. Several Bootheel counties are already approaching habitat restoration goals identified in the Northern Bobwhite Conservation Initiative (NBCI) thanks to these programs. Department staff felt it was necessary to revise the current plan because of widespread success in the Bootheel and increased efforts to improve quail habitat on two Quail Emphasis Areas in the region.

Several Bootheel counties will likely be the first in the nation to reach NBCI habitat goals as a result of southeast Missouri farmers and landowners establishing native grass field borders, shrub plantings and edge feathering. In fact, Scott County has been recognized as the first county in the nation to do so. Local Department of Conservation, Farm Service Agency, Natural Resource Conservation Service and Soil and Water Conservation District staffs have been working hand-in-hand with landowners to provide technical and financial assistance and rental equipment to complete the numerous habitat projects.

Quail monitoring in the Southeast Region in 2007 has shown a five-fold increase in the number of coveys on cropfields with CP33 field borders compared to cropfields without CRP field borders. The 2007 Annual Conservation Agent Roadside Survey showed a 200% increase in quail over 2006 levels in the Southeast Region. Hunters have also noticed the positive response in quail numbers during the 2007 hunting season with multiple parties finding more than one covey per hunting hour.

"As a chamber director I am very pleased when I hear the hunters commenting on the increase in quail they have seen in the area. Hunting has an economic impact on our area because just like the regular tourist hunters coming to the different communities spend money at the gas stations, restaurants/cafés, stores and so. It is amazing what restoring habitat and increasing a bird species to an area can do for the human population that inhabits it."
MISSY MARSHALL
EXECUTIVE DIRECTOR
SIKESTON AREA CHAMBER OF COMMERCE

Public Land Work Benefits Quail

Department staff have ramped up efforts to improve habitat conditions on several conservation areas in the Southeast Region, especially on the two Quail Emphasis Areas. Last fall, Department work teams were able to complete over 500 acres of prescribed burning on Crowley's Ridge Conservation Area. Staff also finished 20 acres of light disking, 10 acres of edge feathering, and sprayed over 100 acres of invasive vegetation to further enhance habitat on the area. At the Maintz Wildlife Management Area, staff completed 100 acres of prescribed burning, 5 acres of edge feathering, 20 acres of light disking and sprayed over 40 acres of invasive vegetation.

ATV Guided Quail Habitat Tour

A quail habitat field tour was held last July in Cape Girardeau County. The ATV guided tour attracted 45 landowners with several from within the Gordonville Quail Focus Area. The ATV guided tour was held on a farm where a significant amount of habitat work has been completed in recent years. Department staff were on hand to lead the tour and to answer questions about cost share programs and quail habitat practices.

SouthwestRegion

Southwest Region's Model Farm Exhibit

As part of the regional marketing for the state quail plan, the Southwest Region included the development of a scale-model "typical" production-farm exhibit. The exhibit visually demonstrates some of the most common quail management practices that could be implemented on a rural Missouri farm landscape. Funding for the exhibit has come from the Department of Conservation, Missouri Conservation Heritage Foundation, and the Ozark Plateau Chapter of Quail Forever.

The exhibit has two halves with the exact same landscape layout on both sides. One half shows "good" habitat management practices, and the other "bad" ones. The tabletop model of a farm scene will be used at fairs, field days, school events, workshops, agriculture conferences, etc. to show private landowners and others the kinds of habitat practices the Department promotes for quail and grassland species. The exhibit will be made available to any of our resource partners to use at any appropriate function, such as Soil & Water Conservation District annual meetings or conservation partner annual banquets.

Bobwhite Quail Featured at Major Farm Event

The Fall Farmfest in Springfield attracts nearly 50,000 landowners from across the region and neighboring states. Last October, the majority of these landowners filtered through the Missouri Department of Conservation exhibit over the three-day event. Regional staff from Private Land Services, Protection, Forestry, and Outreach & Education Divisions answered questions nearly non-stop from the public, including ones related to the quail exhibits, which have become a regular feature of this event. What makes this event so unique from others we participate in is the fact that the audience is nearly 100% rural landowners or people with ties to managing the land. Plans are to continue to target quail through educational exhibits over the next several years at the Fall Farmfest.

Talbot Landowner Cooperative Expands in Southwest Region Focus Area

Private Land Conservationist Mark Hutchings and Wildlife Management Biologist Frank Loncarich continued work with several Lawrence County landowners close to the Talbot Conservation Area, one of three Quail Emphasis Areas in Southwest Region. As a result of their efforts and private landowner interest in restoring quail habitat, a landowner cooperative is starting to emerge around the Talbot Conservation Area. Farmers and recreational landowners in the cooperative are working together to improve quail and grassland bird habitat by sharing equipment, holding meetings, and helping each other with habitat projects. For example, Rick Colley has planted native grasses and wildflowers and fenced out adjacent woodlots to benefit quail. Close by, Mason Colley will be planting 40 acres of warm-season grass this spring and the group plans to burn Robert Webb's remnant prairie and open woodland this spring to control cool-season grasses and woody vegetation. Some landowners in the focus area will be installing CP-33 buffers this year because of the economic benefits and habitat improvements the program provides. Mark and Frank have also hosted tours on the Talbot Conservation Area to highlight woodland and savanna restoration and early successional habitat management such as herbicide spraying, food plots, light disking, and managed grazing for wildlife.

Tallgrass Prairie Management for Grassland Birds

A major goal in 2007 and 2008 for Wildlife Division in the Southwest Region is to treat approximately 5,000 acres of prairie or grassland on conservation areas with prescribed fire, invasive plant control, or woody vegetation removal. Work teams are quickly approaching this goal as a result of the good weather last summer and fall.

District work teams are also recreating prairie grasslands by converting fescue fields to cropland, and eventually a diverse mix of native grasses, wildflowers and native legumes. The entire restoration process takes five to seven years before native wildflowers start to bloom, but the long wait is worth it. So far, Wildlife Division staff has restored several hundred acres of prairie and more are in various stages of restoration. Many of these converted fields support good populations of quail and grassland birds like short-eared owls and grasshopper sparrows. Future plans will be to work with permittee farmers to graze the restored grassland to promote better nesting and brooding habitat for quail and prairie chickens.

Comment [MDC1]: I still have trouble using the word "recreate". I see this and think of a show on The History Channel.

For more information on northern bobwhite or to share your landowner success story, contact the Missouri Department of Conservation at 573-751-4115 or Regional Office.

Northwest Regional Office
701 James McCarthy Drive
St. Joseph, MO 64507
(816) 271-3100

Ozark Regional Office
551 Joe Jones Blvd.
West Plains, MO 65775
(417) 256-7161

Kansas City Regional Office
3424 N.W. Duncan Road
Blue Springs, MO 64015
(816) 655-6250

Northeast Regional Office
3500 S. Baltimore
Kirksville, MO 63501
(660) 785-2424

Southwest Regional Office
2630 N. Mayfair
Springfield, MO 65803
(417) 895-6880

St. Louis Regional Office
2360 Highway D
St. Charles, MO 63304
(636) 441-4554

Central Regional Office
1907 Hillcrest Drive
Columbia, MO 65201
(573) 884-6861

Southeast Regional Office
2302 County Park Drive
Cape Girardeau, MO 63701
(573) 290-5730

2008 Southeast Quail Study Group
North Carolina State Report
Submitted by:
Mark D. Jones, Ryan Myers, and John Wooding,
North Carolina Wildlife Resources Commission

Bobwhite Status

Northern bobwhite quail (*Colinus virginianus*) populations have declined significantly throughout the southeastern United States over the last several decades, and North Carolina's quail population has mirrored this trend. Although there have been minor annual fluctuations in the state, both quail call count survey results and avid hunter survey results over the last decade indicate that quail abundance may be stabilizing at a low level consistent with limited available habitat on the Coastal Plain, but populations in the Piedmont and Mountains continue to decline.

Cooperative Upland Habitat Restoration and Enhancement Program (CURE)

Bird species that require early succession habitats are among the most imperiled species in the eastern United States and within North Carolina. Bobwhite quail have become the "flagship species" among this group that also includes numerous high priority songbirds. In response to these population declines, the Commission approved and funded "small game implementation strategies" presented by the Division of Wildlife Management on August 30, 2000. During the following year, the Division made necessary personnel assignments and developed a program to accomplish the nine objectives approved by the Commission. Initially, Cooperative Upland habitat Restoration and Enhancement (CURE Phase I) program work was focused in 3 cooperatives located in the northern Coastal Plain (Halifax and Northampton Counties), southern Coastal Plain (Robeson County), and the western Piedmont (Iredell County).

CURE Phase II began January 1, 2007. Under CURE II, focus in the western Piedmont shifted from the Iredell cooperative to the promotion of native warm season grasses (NWSG) over a larger area. The other original CURE I cooperatives remain a vital part of CURE II. Today, following the same principles established in 2000, we are using the CURE program to implement whole farm management plans designed to increase populations of bobwhite quail, songbirds, and other wildlife which depend upon early succession habitats. Currently, private landowners have 13,263 acres enrolled in the CURE II program and are actively managing 1,152 acres.

The Division did not stop with habitat management on the private cooperatives, and additional programs have been developed to enhance and expand CURE. Portions of four state-owned Game Lands totaling 21,456 acres have been designated Game Lands CURE areas and are intensively managed for bobwhite quail and songbirds. NCWRC staff have established a position to work with the U.S. Fish and Wildlife Service's Landowner Incentives Program (LIP) and manage longleaf pine habitats to mimic natural fire-maintained ecosystems in 4 southeastern North Carolina counties (Bladen, Cumberland, Duplin, and Sampson). Landowners owning a combined 21,000 acres have 2,237 acres enrolled under LIP management. NCWRC has obtained 2 grants from the North Carolina Department of Justice to implement early succession

habitat improvements on corporate farms operated by Murphy-Brown, LLC and other private corporations on over 7,000 acres in Bladen County. Finally, NCWRC has entered into a cooperative agreement with the U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS) to establish biologist positions in each of North Carolina's three Regional NRCS offices. These biologists are in positions to influence Federally-regulated wildlife habitat policy and management on agricultural lands throughout the entire state.

The Division is monitoring bobwhite quail, songbirds, and vegetation response to management on each CURE area (private and Game Lands) to provide a measure of the success of our efforts. The CURE Program is the first step towards recovery of wild bobwhite quail and declining populations of songbirds and other wildlife dependent upon grass/shrub habitats. North Carolina's initiative has received national recognition for providing an example of implementation of the national bobwhite recovery plan called for in the "Northern Bobwhite Conservation Initiative". Furthermore, other focal species such as high priority songbirds are benefiting from habitat enhancements.

Funding for CURE II expires on December 31, 2009. Commission staff are currently proposing an expansion of CURE into a Phase III to run from January 1, 2010 through December 31, 2014. Our staff recommendation would increase acreages managed under CURE while maintaining personnel hired to implement earlier efforts. We would also continue to expand Corporate partnerships and fund three positions to work with the NRCS. This option would allow our staff to effectively monitor the efforts of our habitat enhancement in each of the focal areas and provide flexibility to expand Corporate CURE to involve additional partners. We would attempt to provide limited small game hunting opportunities on managed areas and provide sportsmen a return on the investment of CURE dollars over the last 8 years. Hunting opportunities could maintain the interest and support of sportsmen and be critical to the future of small game management in North Carolina. All of these efforts will be necessary to have any reasonable chance of positively influencing landscape scale populations of quail, rabbits, and focal songbird species. We must point out that even our best case option alone will not restore quail to 1980 levels (recommended by the NBCI) across the state of North Carolina or even within focal areas. However, we believe these efforts can increase populations of some focal species on a local basis depending on the specific area.

Results of Biological Monitoring for CURE Programs (2007-2008)

To evaluate the impacts of CURE on birds and habitat, we conducted spring and winter songbird surveys, summer and fall quail surveys, summer and winter vegetation surveys, a spring grouse survey at South Mountains, a fall evaluation of useable habitat for quail, and photoplot surveys. The 2007-2008 season represents the sixth year of post-treatment surveys for the CURE private cooperatives and the fifth year for the CURE Game Lands.

The fall covey and breeding quail call surveys continued to provide evidence that CURE habitat improvement efforts have stimulated positive quail population responses on some CURE areas. On coastal private cooperatives, quail populations appeared to peak (~2x baseline counts) in 2005-2006, but decreased slightly thru 2007. Surveys on the southeastern coastal plain Rowland cooperative in 2005 provided the highest fall covey counts (5.6 coveys heard/listening

points) and largest initial response trend (+0.9 coveys heard/listening point/year). Northern coastal plain Benthall cooperative quail surveys appeared to maintain similar initial trends, but counts were more variable and comparatively lower (2.1 coveys heard/listening points). No coveys were heard on any of the new warm season grass contracts established area within the Piedmont focal area in 2007. During the original CURE I phase, the Piedmont Turnersburg cooperative quail trends declined similar to regional references and provided no evidence that quail benefited from habitat improvements at the landscape scale.

Positive quail responses were also noted on all CURE Game Land areas which continue to annually increase. Despite initial low baseline counts observed on all of the CURE Game lands, Suggs Mill Pond (~0.8 coveys heard/listening point) and Sandhills (~0.4 coveys heard/listening point) counts in 2007 were the highest since surveys were initiated. Counts on all CURE game lands have nearly doubled since baseline observations were conducted in the 2001-2002 season.

The total combined affect of both wintering and breeding habitats on CURE areas appeared to be the best indicator of quail population responses. CURE habitat improvements on private cooperatives has converted cropland, which provides cover only in the summer months, into habitat which is available to quail year-round; almost doubling the amount of available winter quail habitat. (~4-6% of the landscape). Only the Turnersburg cooperative had significant changes in the amount of available breeding habitat since 2001 due to the establishment of a few large warm-season grass fields. CURE Game Lands are found mainly in forested landscapes, and quail populations have responded slower because early succession breeding habitat improvements in forested landscapes take longer to implement and develop.

In the spring 2007, songbird survey methodologies on the private CURE cooperatives were changed to meet the needs of the next phase of the CURE program (CURE II). Methodology changes included the development of control sites for each private cooperative, standardization of survey point locations, refinement of focal early succession songbird lists, and the combination of breeding quail/focal songbird surveys. These survey modifications were made to improve our ability to measure future biological responses to CURE management.

The 2007 breeding songbird surveys on CURE game lands continued to provide significant evidence that habitat management increased focal shrub nesting songbird population trends. Within the shrub-nester group, counts of indigo buntings, eastern towhee, and common yellowthroat have increased the most from CURE management. These species have appeared to benefit from the taller, denser understory cover produced in CURE timbered forest stands. Greatest overall focal songbird responses were found on the Sandhills game lands where initial CURE game land prescriptions were completed first. Little change was noted in counts of other grassland or early succession forager songbird species.

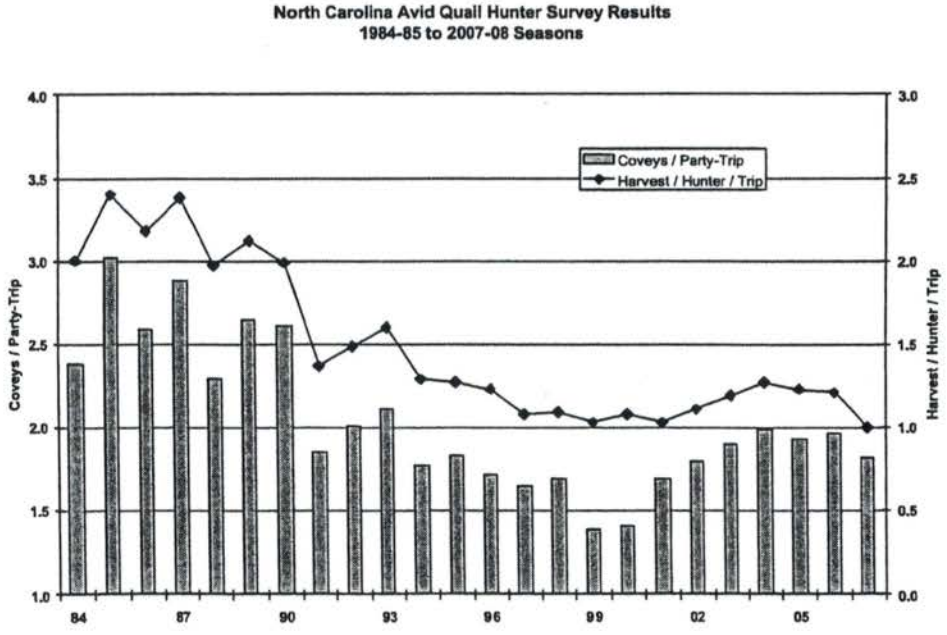
Wintering CURE focal songbird species have also appeared to benefit from management activities within some CURE Game Lands. Focal bird trends were primarily driven by migratory white-throated, song, and savannah sparrows. CURE efforts do not appear to significantly change landscape-wide trends in densities of focal wintering species, but results suggest that CURE improvements influenced their distribution across the game land landscape. Significantly higher densities were found along CURE-managed fields and field borders with heavy horizontal cover. Year to year variations in winter focal bird abundance had a greater influence on density estimates than habitat improvements.

In 2007, we continued a study Sandhills Game Land to determine how CURE management practices are impacting populations of Bachman's sparrow, a bird of high conservation concern. Intensive point count surveys revealed larger than expected numbers of Bachman's on the CURE area. A useable habitat survey determined that approximately 50% of the CURE landscape contained useable habitat for Bachman's sparrows, and they occupied about a third of useable stands. Bachman's sparrows appeared to use natural pine stands with wiregrass understory in approximately the same proportion as plantation stands which were heavily thinned and planted to Atlantic coastal panicgrass. Territory establishment rates were similar between these 2 habitat types.

Research and Surveys Programs

2007 Avid Quail Hunter Survey Summary

Eighty hunters participated in the 2007-2008 quail hunting survey, providing information for 1,216 hunts on hunt dates, location, hunting effort, and hunting success. The participants' average age was 60 years (SE 1.5). Hunting effort was heaviest in the coastal plain (69% of the hunts), moderate in the piedmont (29% of the hunts), and lightest in the mountains (2% of the hunts). The hunts were predominately on private land (84%); the other hunts occurred on public land (16%). Each hunter pursued quail an average of 15 days (SE 1.2). Most hunts consisted of a party of two people. An average hunt was 3.9 hours (SE 0.1), during which 1.8 coveys (SE 0.01) were flushed, and 2.0 quail (SE 0.1) harvested. The average daily harvest rate per hunter was 1.1 quail/hunter (SE 0.1). The survey has been conducted since 1984 (Figure 1). Hunter success in terms of coveys flushed and harvest have been relatively steady since the early 1990's.



North Carolina SEQSG Contact Information

Mark D. Jones, Supervising Wildlife Biologist, jonesmd@coastalnet.com

Ryan Myers, Research Survey Biologist, ryan_myers@earthlink.net

John Wooding, Upland Game Bird Biologist, john.wooding@earthlink.net

Benjy Strope, Corporate CURE Biologist, benjy.strope@earthlink.net

Michael Champion, Landowner Incentives Program Biologist, Michael.Champion@earthlink.net

Patrick Farrell, Mountain Technical Assistance Biologist (NRCS), patrick.farrell@nc.usda.gov

John Isenhour, Piedmont Technical Assistance Biologist (NRCS), john.isenhour@nc.usda.gov

Don Barker, Coastal Technical Assistance Biologist (NRCS), don.barker@nc.nacdnet.net

Don Hayes, Private Lands Coordinator, donhayes@embarqmail.com

2007 SOUTHEAST QUAIL STUDY GROUP
STATE PEPORTS
OKLAHOMA

Status
Quail Populations in Oklahoma have declined 1.3 percent annually since 1966 according to the breeding bird survey. However, quail populations in portions of the Western part of Oklahoma have remained stable since 1966.

Roadside surveys during the fall of 2007 decreased 21% over the previous year and 51% below the previous 17-year average. Our annual roadside counts suggested the 2006-2007 quail season would be a down year. Although many sportsmen and biologist from across the state reported seeing more birds than they had the year before. The season seemed to be a little better in 2007 than it was in 2006. Due to all of the rainfall that we had in the spring and summer there was plenty of vegetation for the birds to utilize. Since 2006 was a down year we would not expect a huge boom in population because recruitment was low going into the 2007 nesting season.

The estimated number of quail hunters that hunted the 2007-2008 season was 28,602 which is down 17% from 2006. Quail hunters hunted on average 5.61 day during the 2007-2008 season and averaged 2.63 birds in the bag. Oklahoma's estimated quail harvest for the 2007-2008 season was 380,847 birds which was down 34% from the previous season (579,436).

Focal Area Restoration of Quail Habitat
The Oklahoma Department of Wildlife Conservation (ODWC) and the Natural Resource Conservation Service (NRCS) have developed the Quail Habitat Restoration Initiative (QHRI) to advance quail restoration efforts. The QHRI will operate under the Environmental Quality Incentive Program to provide cost-share and incentive payments to landowners willing to restore and manage quail habitat. Restoration efforts will center on focal areas that have been identified as having a high potential for eliciting population growth and expansion.

QHRI Details: Landowners who enroll in the EQIP-QHRI will have the opportunity to receive cost-share assistance on a variety of practices traditionally offered through EQIP such as brush management, prescribed burning, and prescribed grazing. In addition, landowners may qualify for incentives for implementing a patch-burn-graze system, reducing annual burning to a 3-year rotation, implementing a new grazing system, and for doing upland wildlife habitat management.

Technical Assistance: All applicants received some measure of technical assistance depending on the attributes of their property and how they were ranked. Through the ranking process we were able to fund 20 applicants affecting approximately 19,000 acres

in Oklahoma. Total EQIP dollars allocated for FY 2008: $437,386. This combined with the totals in 2007 we have been able to spend $1,016,285 on 48,443 acres.

Continued Outreach: Through continued contact with landowners within the focus areas we hope to find landowners that are willing to implement a habitat management program that will benefit northern bobwhite quail. We will provide at minimum technical assistance and if a landowner feels that they would like financial assistance we have a tool available to assist them. In, addition a minimum of one public outreach effort per focus area and through continued "door-knocking" we hope to have as many contacts this year as we did last year.

Management Activities

Technical Assistance: During 2007 ODWC has offered technical assistance to over 170 private landowners that incorporate over 170,000 acres. This is a little above the previous 5 year average which is 100 landowners and 100,000 acres.

Equipment Rental: With help from the National Wild Turkey Federation, Quail Unlimited, Charles Blankenship (Big John Tree Spade Company) and private donations, the Department has some specialized equipment for habitat enhancements. The Department has two tree spades with support equipment and one roller chopper that are available for landowners to use for wildlife habitat enhancement projects. The equipment can be rented for a small fee that is used to defray maintenance costs.

Wildlife Habitat Improvement Program (ODWC): Annually the ODWC provides on average $90,000 in cost-share to Oklahoma landowners for improving wildlife habitat. Funds administered are specific to quail, deer, turkey, prairie chickens, waterfowl and pheasant. Biologists are currently developing management plans for 150 applications for this year's allocation.

Landowner Incentive Program (LIP): The ODWC received a LIP grant to provide cost-share incentives to landowners in Western Oklahoma to address habitat restoration for species of special concern. Restoring habitat for Bell's Vireo, Bewick's Wren and Lesser Prairie Chickens will have a positive effect on Northern Bobwhite populations. To date there is no activity but the current allocation is $200,000.

Wildlife Habitat Incentive Program (WHIP): Since July of 2003 the ODWC has served as a Technical Service Provider for the NRCS's WHIP. Four technicians with ODWC provide the project rankings, management plans and conducts status reviews as part of the agreement. This year's appropriation for the WHIP in Oklahoma totaled $256,000 with preliminary funding of 28 projects. Oklahoma has been allocated an additional $760,000 that we are still meeting with landowners and completing plans. Oklahoma's annual appropriation for WHIP consistently ranks in the top three nationally. Since its inception, WHIP has provided 733 Oklahoma landowners with financial assistance totaling over $6 million. However, to date the remaining un-funded applications total more than $3.8 million.

Buffers for Upland Birds (CP-33): Buffers remain a hard sell to Oklahoma farmers. With the current grazing restrictions wheat farmers are unwilling to sign up for a program that mandates fencing. After reallocation Oklahoma has been allotted 2,000 acres. To date just over 600 acres of CP-33 has been contracted in Oklahoma.

In October of 2006 we monitored all the CP-33 fields along with paired controls via flush counts. We were able to flush 4 coveys that equaled to 1 quail per 3.6 acres. We also observed 1 pheasant per 2 acres along the buffers that were in the pheasant range.

CRP-SAFE: The Oklahoma Dept. of Wildlife Conservation and USFWS wrote a proposal to install 15,100 acres of cropland back to native brushy habitat. This project is located in Northwest Oklahoma and has a Bobwhite Quail emphasis. We have been able to get 700 acres enrolled and think that once the crops are removed from the fields that we will get more people to sign up due to high fuel prices.

SOUTHEAST QUAIL STUDY GROUP
SOUTH CAROLINA UPDATE
July 2008

STATUS: South Carolina's quail population has declined dramatically over the past 40 years as a result of large-scale changes in land use and the resultant habitat loss and degradation. Between 1952 and 1999, pine plantation acreage in South Carolina increased from approximately 200,000 acres to approximately 2,400,000 acres. Urban sprawl and changes in farming practices have also reduced habitat availability and suitability. USFWS Breeding Bird Survey results indicate an approximate decline of 4.8% annually in bobwhite quail abundance in South Carolina from 1966-2005. Private lands and Wildlife Management Area (WMA) lands under intensive quail management support good to excellent quail populations.

Efforts are underway to establish a Grassland Birds Initiative to achieve greater private land participation in the establishment, enhancement and maintenance of early succession habitat. Bobwhite quail habitat and population goals from the Northern Bobwhite Conservation Initiative are being incorporated into state planning efforts, as well as regional bird conservation efforts such as the South Atlantic Migratory Bird Initiative (SAMBI), a regional bird conservation initiative being conducted through the Atlantic Coast Joint Venture.

HABITAT IMPROVEMENT: SCDNR offers small game management technical assistance to private landowners through the Small Game Project. Nine management plans were written by Project staff during the past year covering over 5,400 acres. Select properties in the Wildlife Management Area (WMA) program are intensively managed for quail. Habitat enhancement for quail on WMA's consists of the standard practices of annual plantings, prescribed burning, strip disking, timber thinning, and creation of forest openings. Herbicide application for the control of invasive sod-forming grasses and understory hardwoods is being utilized on several areas.

SEASONS AND BAG LIMITS: Quail season in South Carolina runs from the Monday before Thanksgiving Day through March 1. Bag limit is 12 birds per day.

SURVEYS

Bobwhite Quail Whistling Cock Survey - This survey has been conducted for the past 29 years, producing reliable trend data that parallels field observations and the USFWS Breeding Bird Survey. Sixty-five permanent routes are established statewide, and survey routes (5.5 miles) are conducted on one morning between June 15 and July 10 each year. The average number of calling males per during the 2007 survey was 8.0 per route, the lowest recorded in the history of the survey.

Quail Brood Sighting Survey- A sighting survey for quail broods is conducted in conjunction with an annual Turkey Brood Sighting Survey. All quail observed by field personnel from July 01 to August 27 are recorded. From these sighting, an annual index of productivity (juveniles/adult) is calculated.

Statewide, the ratio of juveniles to adults in the 2007 survey was 2.9:1, identical to the previous year. The 2008 brood sighting survey is currently underway and results will be available to interested parties in the fall of 2008.

Quail Hunter Survey- Quail hunters are contacted prior to the season and provided with a hunting diary, data sheet, wing tags, and return envelopes. Hunters are asked to provide up to 10 wings for calculating a productivity index (juveniles/adult). Hunters are asked to provide information on hunt locations, hours hunted, flush rates and harvest rates. The coveys per hour index increased from 0.49 coveys per hour in 2005-06 to 0.59 coveys per hour in 2006-07. Quail hunters participating in the survey bagged 0.43 birds/hour in 2006-07.

Fall Covey Counts- Fall covey counts were conducted on 7 WMA's during October and November, 2007. Preliminary fall covey counts in South Carolina indicated the following: (1) Inexperienced observers could be easily trained to utilize the technique; (2) Average time of first call was 35 minutes before official sunrise; (3) Active calling by coveys ceases after approximately 10 minutes; (4) Playback of recorded covey calls failed to elicit response outside of the peak calling period; and (5) Calling rates remain consistently high until at least the third week of November. Fall covey counts will again be conducted on select WMA's during 2008.

CP-33 Monitoring

SCDNR staff have implemented monitoring of CP-33 buffers on 40 treatment farms and paired controls throughout the upper coastal plain of South Carolina. Target species for monitoring include northern bobwhite, eastern kingbird, eastern meadowlark, field sparrow, indigo bunting, and painted bunting. Monitoring is being conducted by existing DNR Wildlife Section staff.

EDUCATIONAL PROGRAMS AND TECHNICAL LITERATURE

For the past 21 years, the Small Game Project has conducted annual quail management seminars for private landowners, land managers, and agency personnel. Over 1100 people have participated in this highly-successful seminar series which combines classroom instruction with field demonstrations.

AGRICULTURAL LIAISON ACTIVITIES

Small Game Project staff continue to work with NRCS and other USDA agencies to incorporate quail-friendly practices into farm conservation plans. Three Farm Bill cost-share biologists have were hired in June 2006 to provide private lands technical assistance and program delivery. These positions are supervised by the SCDNR Small Game Project and are housed in NRCS offices in the upper coastal plain of South Carolina. Each biologist is responsible for a 6-8 county area. In the past year, these Farm Bill biologists have conducted 150 site visits and provided habitat enhancement recommendations for over 48,000 acres in South Carolina.

CP-33 was successfully implemented in South Carolina, with approximately 6100 acres enrolled in habitat buffers throughout the state.

FOCUS AREA INITIATIVES

Project staff and partners have been successful in establishing a 16,000-acre public land (USFS)/private land habitat enhancement cooperative. WHIP funds have been designated for habitat enhancement on private lands within the project boundary. National Forest lands within the project boundary are slated for early-successional habitat restoration through selective thinning and prescribed burning, including growing season burns. This innovative partnership includes representatives from the USDA Forest Service, USDA NRCS, SCDNR, Quail Unlimited, National Wild Turkey Federation, Clemson Cooperative Extension Service, the local Conservation District, and the Regional Resource Conservation and Development Council.
The Indian Creek Wildlife Habitat Restoration Initiative was formalized with an MOU signing by all agency partners on July 21, 2005. Approximately 25 WHIP plans have been written for private lands within the project boundary.

Another special WHIP project is underway at Clemson University's Pee Dee Research and Education Center (REC). This area is comprised of 2800 acres, and has traditionally been used for research on production agriculture technology. The Center has shifted emphasis to an agroecology focus, and habitat improvements for northern bobwhite and other species are being implemented through the WHIP program.

A third focus area for quail and grassland bird habitat enhancement has been established on Wildlife Management Area lands in the Upper Coastal Plain. The area is comprised of approximately 7000 acres in 3 tracts. The project is designed to demonstrate effective quail and grassland bird habitat enhancement techniques on working agricultural and silvicultural landscapes. Management practices to date have consisted of pine thinning, prescribed burning, native warm season grass establishment, field border establishment, and Bermuda grass eradication. Quail and grassland bird populations are monitored annually through breeding season counts and quail are also monitored through fall covey counts and hunter success.

South Carolina's SAFE acreage (2.300 acres) was allocated to a three-county area in the lower coastal plain. Quail and grassland songbirds are the primary focus of the SAFE initiative, which will target whole-field retirement and establishment of native warm season grasses.

RESEARCH PROJECTS

Two research projects examining the effectiveness of selected Farm Bill practices and the resultant population responses of northern bobwhite and other species have been completed under the USDA-NRCS/MSU Bobwhite Restoration Project.

One project was conducted in the upper coastal plain at the Pee Dee REC, and another project was conducted in the lower coastal plain on a private plantation. Both projects are being conducted through Clemson University.

Tennessee Bobwhite Restoration Status 2006-2007
Roger Applegate & Mark Gudlin

The habitat management activities for bobwhites in Tennessee consist of the Farm Wildlife Habitat Program, seed/herbicide acquisition, and cooperative ventures with Quail Unlimited. Seed and certificates are provided for the University of Tennessee Cooperative Extension 4H Food and Cover Enhancement (FACE) project. The highlights of these programs is as follows:

Farm Wildlife Habitat Program- There are two components to this program. The private lands component provides qualifying landowners with a 75% cost-share on approved practices on private lands. During FY07, $87,361.24 was spent on program practices for 73 projects, of which $42,000 was spent implementing native warm season grass plantings and herbicide treatment on 66 contracts affecting 1,100 acres. The public lands component utilizes volunteers from Quail Unlimited Chapters to deliver practices on TWRA, U. S. Forest Service, and Tennessee Valley Authority lands. The cost-share is 75% of costs for approved practices. This year's projects were on three WMA's and a TVA property open to public hunting.

Seed/Herbicide Acquisition - Over 6,100 lbs of seed was purchased and distributed by TWRA personnel for planting on public and private lands. In addition, 887 gallons of herbicide were purchased and distributed.

Quail Unlimited Activities - TWRA works with Quail Unlimited in several ways. Seed is purchased for QU chapter distribution and habitat projects, and support is provided to cost-share the salary of a QU Regional Director to work directly with Tennessee Chapters to guide their habitat activities. Cost-share payments to QU chapters, as noted above, exceeded $61,000 in 2006-07.

4H FACE - Food plot mix seed (5,290 pounds) was supplied for participants in the FACE project at a cost of $3,703. There were 33 winners in the FACE contest that received a certificate from TWRA and a free subscription the Tennessee Wildlife magazine.

TWRA is at the end of its first year of a cooperative agreement that has 4 TWRA Private Lands Biologists working out of NRCS offices. Three of the 4 focus on upland programs, while one is primarily responsible for wetlands programs. This already has been a productive venture, as greatly due to their hard work in meeting the technical assistance demand, TN has been appropriated over $1 million in WHIP funds this year – twice the amount of the previous high year (2007). Another 1,700+ acres have been enrolled in EQIP native grasses in the 2007-08 fiscal year. We look forward to continued progress under the new Farm Bill's programs.

Many gains are being made by Dr. Pat Keyser at the Center for Native Grasslands Management, located at UT-Knoxville. Don McKenzie, National NBCI Coordinator has reported in the past through the SEQSG email list on some of the Center's accomplishments.

Harvest and Hunter Surveys:

Tennessee continued its annual Avid Hunter Survey and will post those results on its website http://state.tn.us/twra when available. A mixed-mode survey incorporating the internet was also piloted.

For more detailed information on quail and private lands accomplishments, contact Roger Applegate and Mark Gudlin at TWRA's Wildlife Division, 615-781-6610.

Virginia – State Report - SEQSG – 2008
Submitted by Marc Puckett and Gary Norman

On January 22nd, 2008, the Board of Directors of the Virginia Department of Game and Inland Fisheries adopted the following resolution at the urging of the Quail Focus Group, a group comprised of private citizens, including a former Virginia Governor, former VDGIF Board Chairman, and 3 current VDGIF board members:

"The DGIF will place the highest priority on the restoration of wild quail populations and promote the sport of bobwhite quail hunting both wild and preserve birds including the development of a bobwhite quail action plan encompassing management, research, education, outreach, coordination (utility & power companies, DOF, timber, VDOT, etc.) and specifically addressing environmental and other factors limiting quail numbers; and establishing official habitats to demonstrate the effectiveness of habitat management."

This began our Departments second foray into developing and implementing a Quail Action Plan (QAP). As some of you know, Virginia had the first official quail plan in the southeast. Quail Plan 1 ran from 1996 to 2001 and was highly successful in many ways, particularly outreach. Shortly after the terrorist attacks of September, 2001, budget shortfalls necessitated the end of the first quail plan. However, VDGIF staff continued to provide outreach and technical assistance for quail management.

Since 2001, Virginia's quail population continued to decline at an estimated rate of 2.9% per year (based on Rural Mail Carrier Survey). Our quail wing cooperator survey, however, suggests that hunter success has remained relatively stable for a decade. On average it takes a little more than 4 hours for an avid quail hunter to find a covey of quail (sample size has dropped to 70 cooperators). Most alarming has been the loss of quail hunters in Virginia. From a high of 143,500 in 1973, quail hunter numbers are now at an all time low of 9,800. For this reason, there will be strong emphasis in the new QAP on hunting opportunity and hunter recruitment. This is also one reason for some focus on hunting preserves and the use of pen-reared quail, not necessarily for restocking, but potentially for youth hunter recruitment through special hunts (numerous strategies in the QAP).

The QAP has been completed as a draft and is being reviewed by many. The timeline for completion is:

- Present to the QFG June 16th , 2008
- Modify and present to the full VDGIF Board, July 15th , 2008
- Revise and present to the full VDGIF Board for final approval in August 2008

There are currently 5 basic goals under the QAP:

1) Improve quail populations in their primary range in Virginia.
2) Increase habitat and quail populations on 3 quail and early-succession wildlife focus areas
3) Provide quail management demonstration areas
4) Increase statewide recreation related to quail
5) Generate funding mechanisms to support quail restoration

Objectives and strategies are too numerous to list in this report, but some are:

- Develop a Virginia Quail Council consisting of numerous go vernment, NGO, and other partners to serve as the technical advisory / implementation arm of the QAP (This has been partially implemented already, as part of this strategy, we developed a Memorandum of Agreement to make quail and early-succession habitat development a priority. So far, it has been signed by the Virginia Dept. of Forestry, the Farm Services Agency, QU State Council, and Central Virginia Chapter of QU, the Appalachian Mountains Woodcock Initiative, and VDGIF. We hope to sign the Virginia Dept. of Conservation and Recreation State Parks, the Nature Conservancy, the NRCS, VDOT, and many others soon. The MOA is under review by 22 potential partners at this time).
- Develop a media outreach campaign to increase awareness of the importance of early-succession habitat and to increase appreciation for ES habitat
- Identify quail habitat focus areas and concentrate habitat development in and around them
- Develop inter-agency / inter-organizational habitat management teams in the 5 VDGIF regions
- Develop volunteer habitat improvement teams (HIT) and habitat advisory teams (HAT) throughout he state
- Conduct a large scale landowner survey to identify obstacles to habitat development
- Tie in the overlapping habitats of pollinator species, necessary for successful farming, with those of quail and other early-succession species (e.g. – comparing Germany to Poland – Germany no hedgerows, few native bees, versus Poland, restored hedgerows, healthy native bee populations)
- Hire additional staff through jointly funded positions with NRCS and VDOF
- Work to promote hunting preserves, particularly for young hunter recruitment
- Develop educational information concerning the use of soft-release systems
- Develop more special "lottery type" quail hunting opportunities by working with hunting preserves and other private landowners actively managing for quail
- Fully develop awareness of quail hunting opportunities within the state, both wild and preserve
- Identify new, long-term funding mechanisms such as, small game stamp, WMA user fee, developing grant writing teams, creating a privately funded endowment for quail lands purchase and management

There are dozens of strategies identified in the QAP. **We sincerely appreciate the help numerous SEQSG member states have given us in the development of our newest QAP** (special thanks to Don McKenzie for traveling all the way from Arkansas to speak at our VQC organizational meeting in May). We look forward to the updated NBCI and will work hard to implement it. The successes of all states in restoring quail build upon each other and the SEQSG and the NBCI will continue to be the most valuable tools for all of us.

POST TREATMENT EFFECTS OF HABITAT MANAGEMENT ON A WINTERING GRASSLAND BIRD COMMUNITY IN SOUTH TEXAS

E. ALEJANDRO LOZANO-CAVAZOS, Caesar Kleberg Wildlife Research Institute, Department of Animal and Wildlife Sciences, Texas A&M University-Kingsville, Kingsville, TX 78363, USA

LEONARD A. BRENNAN, Caesar Kleberg Wildlife Research Institute, Department of Animal and Wildlife Sciences, Texas A&M University-Kingsville, Kingsville, TX 78363, USA

WILLIAM P. KUVLESKY, JR, Caesar Kleberg Wildlife Research Institute, Department of Animal and Wildlife Sciences, Texas A&M University-Kingsville, Kingsville, TX 78363, USA

FIDEL HERNANDEZ, Caesar Kleberg Wildlife Research Institute, Department of Animal and Wildlife Sciences, Texas A&M University-Kingsville, Kingsville, TX 78363, USA

WADE HARRELL, The Nature Conservancy, Refugio-Goliad Prairie 3303 US Hwy 59 North Victoria, TX 77905

TIM ANDERSON, Partners for Fish & Wildlife and Coastal Programs U. S. Fish & Wildlife Service 6300 Ocean Drive, Unit 5837 Corpus Christi, TX 78412-5837

STEVE DeMASO, Texas Parks and Wildlife Department, 4200 Smith School Road, Austin, TX 78744, USA

STAN REINEKE, U. S. Department of Agriculture, Natural Resources Conservation Service, 13434 Leopard Street, Ste. A-14 Corpus Christi, TX 78410, USA

Abstract: An update of the ongoing research to assess the ecological and economic impacts of The Coastal Prairie Conservation Initiative is presented. We compared the effectiveness of two habitat management methods, 1) a combined treatment based on roller chopper, summer fire and chemical [CT], 2) summer fire [SF], along with open grassland as a control [C] on the diversity and abundance of a grassland bird community. Grassland bird species richness during winter 2005-2006 was 31, 15, and 7 species on summer fire, combined treatment, and control respectively. Compared to winter 2005-2006, species richness during winter 2006-2007 decreased 1.3 times on [SF] treatment, whereas [CT] treatment increased 1.7 times. On the control site, species richness remained similar with 7 and 8 species on both winters respectively. The most abundant species across treatments were Savanna sparrow (*Passerculus sandwichensis*), Meadowlark (*Sturnella magna*), and Northern bobwhite (*Colinus virginianus*). Savanna sparrow on [CT] treatment was 2.8 times greater than on [SF] treatment, and 1.8 times greater than on [C] during the first winter, whereas during the second winter relative abundance was similar between [CT and SF] treatment, and 1.7 times greater than on [C]. Meadowlark abundance was similar across winters on [CT and C] treatments but 2.5 and 1.5 times lower than on [SF] treatment during first and second winter respectively. Bobwhite abundance was similar between [CT and SF] treatments across treatments and greater than on [C], abundance has been decreasing as time progressed since treatments were applied. The RBC and SB treatments seem to support the greatest diversity of wintering birds in the coastal prairie ecological region of Texas.

A LATITUDINAL COMPARISON OF DENSITY-DEPENDENT REPRODUCTION IN NORTHERN BOBWHITE: ARE SOUTHERN BOBWHITE POPULATIONS MORE SUSCEPTIBLE TO HARVEST?

JOSEPH P SANDS, Caesar Kleberg Wildlife Research Institute, Texas A&M University—Kingsville, Kingsville, TX 78363 USA

STEPHEN J. DEMASO, Caesar Kleberg Wildlife Research Institute, Texas A&M University—Kingsville, Kingsville, TX 78363 USA

FIDEL HERNÁNDEZ, Caesar Kleberg Wildlife Research Institute, Texas A&M University—Kingsville, Kingsville, TX 78363 USA

MATTHEW J. SCHNUPP, Caesar Kleberg Wildlife Research Institute, Texas A&M University—Kingsville, Kingsville, TX 78363 USA

TRENT W. TEINERT, Caesar Kleberg Wildlife Research Institute, Texas A&M University—Kingsville, Kingsville, TX 78363 USA

LEONARD A. BRENNAN, Caesar Kleberg Wildlife Research Institute, Texas A&M University—Kingsville, Kingsville, TX 78363 USA

DALE ROLLINS, Texas AgriLife Research, Texas A&M University, San Angelo, Texas 76901, USA

ROBERT M. PEREZ, Texas Parks and Wildlife Department, La Vernia, Texas 78121, USA

Abstract: Given the long-term declines in northern bobwhite (*Colinus virginianus*) populations, the effects of fixed, liberal harvest regulations on quail harvest at the state-scale have received considerable attention Research indicates that harvest regulations established by state wildlife agencies are appropriate for regulating quail hunting at broad-spatial scales, but are not designed to manage quail harvest at small-spatial scales. Intensive harvest at small-spatial scales may alter the resiliency of local quail populations. Sustained-yield harvest has been recommended as an approach to regulate bobwhite harvest at small-spatial scales. Sustained-yield harvest theory is dependent on the presence of compensatory population mechanisms (i.e., density dependent production and survival). Although density-dependent reproduction has been documented for mid-latitudes, it is unknown whether quail populations in southern latitudes exhibit the phenomenon because of the strong influence of weather on production. In south Texas, poor production can follow high or low spring densities if the breeding season is subject to drought. Conversely, excellent production can follow high or low spring densities when greater than average precipitation occurs. We conducted a meta-analysis of northern bobwhite productivity in northern (Wisconsin, Iowa, Illinois) and southern (Texas) latitudes to test for the presence of density dependent reproduction. Preliminary results indicate evidence for stronger density dependent reproduction in northern latitudes ($r^2 = 0.40$), but not southern latitudes ($r^2 = 0.14$). Lack of density dependent reproduction in southern latitudes may make these populations more susceptible to overharvest; a factor not previously considered in harvest regulations.

Overwinter survival of northern bobwhites on non-hunted areas in Texas.

TRENT TEINERT, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX 78363

JOSEPH SANDS, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX 78363

MATTHEW J. SCHNUPP, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX 78363

LEONARD A. BRENNAN, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX 78363

STEPHEN J. DEMASO, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX 78363

FIDEL HERNÁNDEZ, Caesar Kleberg Wildlife Research Institute, Texas A&M University–Kingsville, Kingsville, TX 78363

DALE ROLLINS, Texas Cooperative Extension, Texas A&M University, San Angelo, TX 79601

ROBERT M. PEREZ, Texas Parks and Wildlife Department, La Vernia, TX, 78121

Abstract: As part of an ongoing investigation of sustainable harvest strategies for northern bobwhite (Colinus virginianus) populations, we are estimating overwinter survival in 2 Texas ecoregions that have stable bobwhite population trends, the Rolling Plains and the Rio Grande Plains. Estimating overwinter survival in the absence of hunting is an important variable in developing a sustained–yield harvest strategy for bobwhites. Overwinter bobwhite survival was estimated using radio-marked bobwhites from 16 November 2007 to 29 February 2008. Overwinter survival estimates were calculated using Kaplan–Meier staggered–entry approach. A 7–day censoring period was used to minimize bias associated with capture, handling and radio–collaring of bobwhites. We found survival rates with the Rolling Plains (n = 61) having overwinter survival of (0.293 ± 0.101 [95%CI]) and the Rio Grande Plains (n = 91) with (0.145 ± 0.055). These estimates are relatively lower than what would be expected of a sustainable population. We will discuss possible reasons for the low survival estimates which include radio telemetry induce mortality and environmental conditions.