

# ROAD *to* RECOVERY

*Five Year Benchmark Report*

# ENDORISING PARTNERS

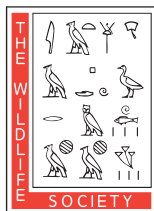
## Universities and joint ventures



## Government agencies



## Non-government organizations



*Note: An endorsing partner supports the need, goals, and challenges for quail restoration. They do not necessarily support all of the strategies within the plan.*



# ROAD *to* RECOVERY

*Five Year Benchmark Report*



*by*

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# COMMISSIONER'S CHARGE



BEN ROBINSON PHOTO

*"Since we started the warm season grass plantings and prescribed controlled burns that you designed we now have more quail on our farm than I can remember. In fact I think we now have a huntable population of birds for the first time since the early 1980's."*

— Ches Riddle, Jr.  
Kentucky Landowner

**G**ROWING UP AN ole Illinois farm boy, hunting ring-necked pheasant was considered a rite of passage. Coming to Kentucky in 1974 to attend Eastern Kentucky University left a void in my upland bird hunting activities. Then I discovered bobwhite quail – game on! The northern bobwhite quail is an outstanding wildlife resource of which we are blessed. It is not only the hunt, but the bird itself, with the easily recognized song we all enjoy. This, along with the companionship of our canine friends in a match of point and flush makes this bird exceptional. As Commissioner of the Kentucky Department of Fish and Wildlife Resources, I am committed to work with our Commission, partners, and stakeholders, to ensure we have quail available for future generations to enjoy.

Since April 2008, our "Road to Recovery: The Blue-

print for Restoring Northern Bobwhite in Kentucky" has guided the Department and our partners toward stabilizing and increasing bobwhite populations. This was a ten year strategy, so it is time KDFWR documents this five-year assessment.

You will find we have been very successful in the areas where we have really focused on quail habitat creation, enhancement, and restoration. The challenge is now the path forward for the next five years of our 'road to recovery.' Over 30 organizations supported the restoration plan and therein lies our continued success. The path forward is heavily dependent on strong collaboration of our partnerships.

Our charge is to get involved, get inspired, and get dirty. Changing the culture of land management in Kentucky will not happen overnight. It will not be easy; it will be hard work. Honestly, it's one of the greatest wildlife restoration challenges we've ever faced. As the old adage goes, "nothing worth doing is ever easy." This is worth doing. It's so much bigger than bobwhite. We will change how the land is managed for the benefit of today, and more importantly, for those of tomorrow.

— Gregory K. Johnson  
Commissioner, Kentucky  
Department of Fish and  
Wildlife Resources



JOHN BRUNJES PHOTO



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JOHN BRUNJES PHOTO

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# ROAD TO RECOVERY:

## Benchmark Report Introduction



DAVE BAKER PHOTO

*“As landowners, we are happy to be a part of the Quail Recovery Program. Along with the increase in quail population, we have also had a noticeable increase in rabbits, which always thrills our grandchildren when we drive across the farm.”*

— Jim and Joyce  
Woodyard,  
Livingston County  
Landowners

**I**N APRIL 2008, Kentucky released its’ inaugural northern bobwhite restoration plan. It was full of challenges, big ideas, new catch phrases like the “four P’s” (people, partnerships, pinpoint, and patience), and measures of success. This report is a product of that plan. It is designed to self-assess our progress – our successes and our failures. We’re pleased to report we have more successes than failures, but there’s plenty of room to improve. We intend to do just that!

Upon the plan’s release, financial investments, championed by Commission Chairman Dale Franklin, soon followed. Those investments were substantial resulting in several million dollars over a two year period. Those dollars weren’t wasted. The plan paved the way. Dollars flowed to the newly established quail focus areas with much going towards capital investments in the form of equipment. Added manpower also resulted as extra hands made the hard work of quail management doable. The funding surge motivated field staff, proving yet again, what a team of dedicated professionals can accomplish.

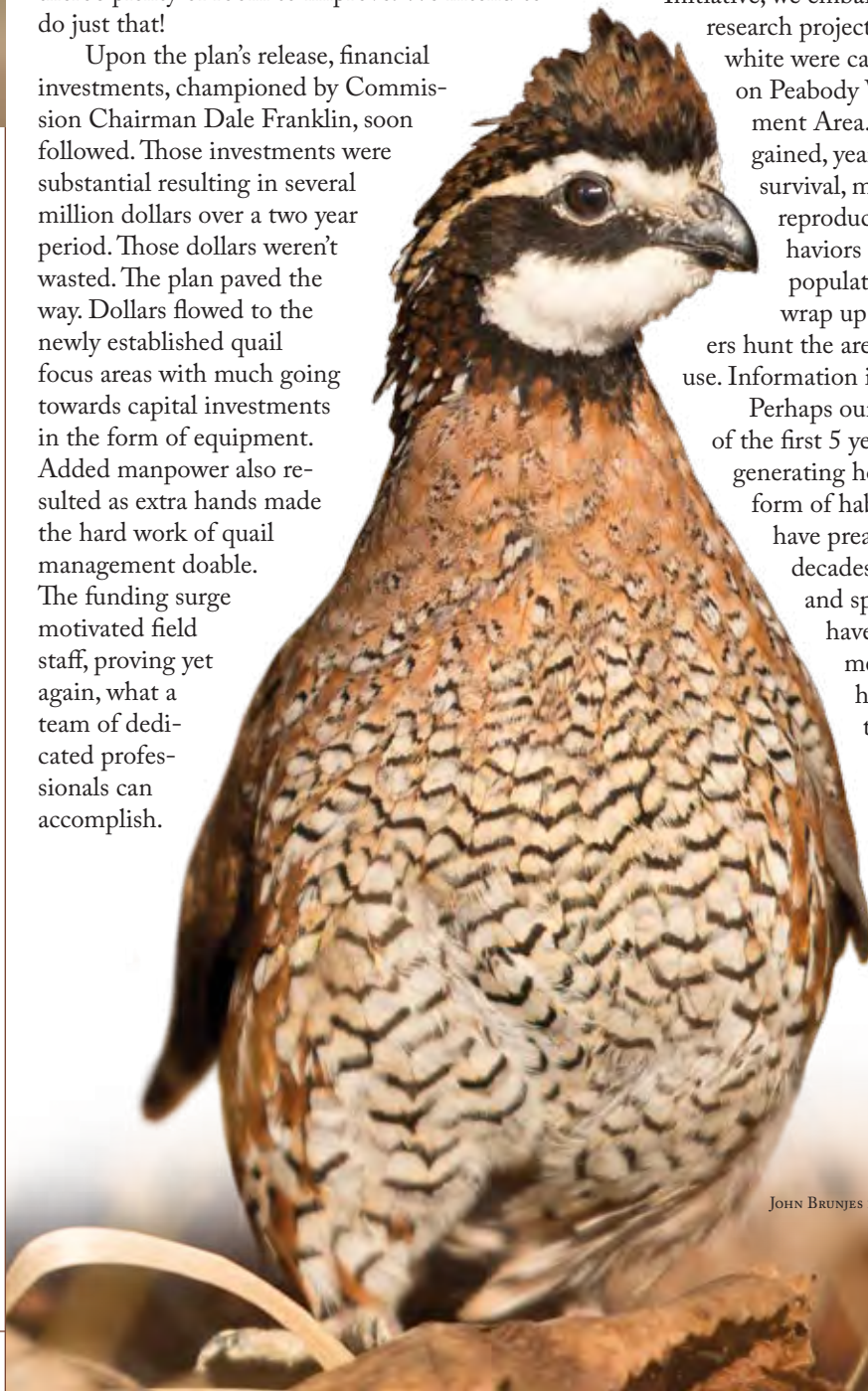
Regulation changes also followed. They were designed to take liberal bobwhite harvest management to more conservative levels. This was not a message that hunting caused bobwhite declines, but an effort to protect our chance for success in the short run. Increased management and publicity on public land focal areas could attract added hunting pressure. When populations were low, it could have quelled the bobwhite response. We couldn’t take that chance.

We invested in the largest bobwhite research project in the state’s history. In collaboration with the University of Tennessee, the home of the National Bobwhite Conservation

Initiative, we embarked on a 5-year research project. Over 2,000 bobwhite were captured and released on Peabody Wildlife Management Area. Knowledge was gained, year around, regarding survival, mortality, habitat use, reproduction, evasive behaviors from hunting, and population estimates. We’ll wrap up by learning if hunters hunt the areas that bobwhite use. Information is power.

Perhaps our single biggest goal of the first 5 years was aimed at generating hope. Hope in the form of habitat. Biologists have preached habitat for decades. Our landowner and sportsmen audience have grown weary of the message. Too often, habitat didn’t derive the intended result. Apathy became our enemy, success will be our savior.

We bring you success! As a whole, our focal areas have shown overwhelming support for the habitat theme.



JOHN BRUNJES PHOTO





OBIE WILLIAMS PHOTO

Every single area had an increasing trend over the last 5 years. Some of the responses exceeded what we believed was possible. One of our mantras over the last 5 years has been, “go big, or go home.” That premise carried across many of the strategies we deployed, but it was most poignant to how we developed habitat. Prior failures were typified by small scale habitat development that lacked connectivity and proper maintenance. We’ve long known how to make quail habitat, but we’ve never had the road map, focus, and funding to pull it off at scales that matter.

Many of the projects we deployed were, to be honest, uncomfortable. Traditional techniques to engage our partners, public, sportsmen and women haven’t yielded results. It was time to try new things. We collaborated with partners to have a conservation rally in Livingston County. Over 250 people joined us at that event. We delved into blogging and social media. The Kentucky Bobwhite Battalion ([www.facebook.com/kentuckyquail](http://www.facebook.com/kentuckyquail)) is the 2nd largest bobwhite-centric facebook group with over 2,250 members. We even hosted a bird dog parade with the Girl Scouts in the rain (not everything worked out as we planned). We will continue to push into uncharted waters. When you’re a little uneasy, then it’s sure sign that you’re pushing the boundaries of where

you’ve been before.

The plan did serve as our guide, but we did not rigidly follow it. We took advantage of opportunities as they presented themselves and abandoned projects where obstacles risked success. Most importantly, you’ll see new a focal area in Shaker Village. Our first major success story resulting from the Department’s focus on bobwhite wasn’t even in the plan!

It’s also worth noting that we abandoned the Straight Creek Focal Area in southeast Kentucky. Uncertainty in the coal industry put our investments in jeopardy, so we made the difficult decision to move on. Finally, our endorsing partners have changed. We’ve lost some old friends, but have gained some new ones. We look forward to building stronger relationships in the years ahead.

This report is designed to demonstrate how we’re doing. We challenge you to review it closely. It’s half time, time to re-focus, and strategize for the finish. Point out where we are falling short. But, challenge yourself to join the fight, so we can all do it bigger and better. Thanks for all the support over the last five years. It’s gone better than we could have ever expected, but resting on our laurels is not in the cards. Halftime is soon to be over, let’s take the second half!

*“The change in habitat has produced a very noticeable difference in wildlife. We now have 10-12 coveys of quail that we can hunt. Our deer hunting has also improved tremendously and we are able to successfully trap fox, coyote and bobcat. We also enjoy watching the abundance of songbirds that use our CREP fields.”*

— Terry Partin  
Adair County Landowner



# KENTUCKY NORTHERN BOBWHITE CONSERVATION INITIATIVE

## Technical Quail Plan Goals (from 2008)

### GOAL 1:

Stabilize bobwhite populations statewide

### GOAL 2:

Increase bobwhite populations in focus areas

### GOAL 3:

Increase bobwhite populations on focal wildlife management areas

### GOAL 4:

Increase statewide recreation related to bobwhite

### GOAL 5:

Generate funding mechanisms to support bobwhite restoration

### HOW ARE WE DOING?

In the 2008 plan, each Goal's challenges included a list of strategies for success. In this update, gauges illustrate how many of those strategies have been employed in the past 5 years. This example shows that 6 of 12 strategies were implemented, indicating a challenge that is halfway completed.





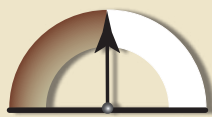
# GOAL I

## Stabilize bobwhite populations statewide



BEN ROBINSON PHOTO

### CHALLENGE 1:



**CHALLENGE 1  
5 YEAR SCORE**  
6/12 = 50%

#### Enhance row crop operations

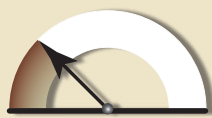
Row crop production has become cleaner and larger scaled over the last several decades. Waste grains have also

been minimized through more efficient machinery. Fallow fielding has been abandoned and many fields are double cropped. Farm Bill conservation practices can improve the row crop system.

#### ASSESSMENT:

All strategies should be employed in 10 years.

### CHALLENGE 2:



**CHALLENGE 2  
5 YEAR SCORE**  
5,000 acres/20,000 acres = 25%

#### Augment mine reclamation projects

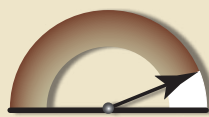
Reclaimed coal mine lands provide a non-traditional opportunity for quail habitat. Current mine reclamation practic-

es could be improved through seed mixes, shrub plantings, and habitat design.

#### ASSESSMENT:

In 10 years, enhance 10,000 acres of mine reclamation projects for early successional wildlife, and renovate 10,000 acres of bond released lands for early successional wildlife.

### CHALLENGE 3:



**CHALLENGE 3  
5 YEAR SCORE**  
7/8 = 87.5%

#### Revolutionize grazing operations

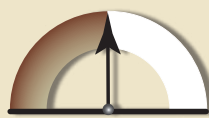
Livestock owners across the Commonwealth almost exclusively rely on fescue as forage. Cattle rotations are minimal

and forage production is rarely maximized. Farm Bill conservation practices can be used to change Kentucky's grazing system.

#### ASSESSMENT:

Employ 8 strategies in 10 years.

### CHALLENGE 4:



**CHALLENGE 4  
5 YEAR SCORE**  
4/8 = 50%

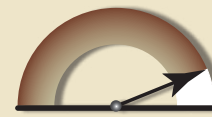
#### Spawn participation in cost-share programs, particularly those designed for quail

There are more opportunities to fund quail habitat than any time in history. Landowners are not fully taking advantage of federal and state programs. Therefore, they must be informed and educated on the economic and environmental benefits of government programs.

#### ASSESSMENT:

All strategies should be employed in 10 years.

### CHALLENGE 5:



**CHALLENGE 5  
5 YEAR SCORE**  
7/8 = 87.5%

#### Amplify prescribed burning across the landscape

Fire was once a driving ecological force in Kentucky. Native Americans readily used fire to

clear land for hunting and agriculture. Prescribed fire is one of the most beneficial management tools available, yet it is not a prominent management practice.

#### ASSESSMENT:

All strategies should be employed in 10 years.

### CHALLENGE 6:



**CHALLENGE 6  
5 YEAR SCORE**  
3/3 = 100%

#### Establish Kentucky-based quail research

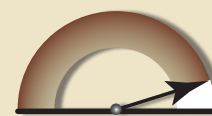
Although bobwhite quail have been extensively studied, little research has occurred pertaining

to the Kentucky landscape. Moderate to small farms, recreational farms, and reclaimed mine lands create a dynamic and unique landscape. There is much to learn about quail in Kentucky.

#### ASSESSMENT:

Employ 3 strategies in 10 years.

### CHALLENGE 7:



**CHALLENGE 7  
5 YEAR SCORE**  
18/20 = 90%

#### Generate public interest and awareness about bobwhite

The majority of the public is not aware of the severity of the quail decline. Nor, do

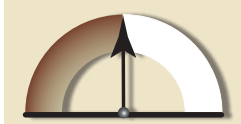
they understand the reasons driving the decline, the basic habitat requirements of the gamebird, or management practices needed to restore them.

#### ASSESSMENT:

Employ a minimum of 20 strategies in 10 years.

# QUAIL PLAN GOAL I

## CHALLENGE 8:



**CHALLENGE 8  
5 YEAR SCORE**  
2/4 = 50%

**Supply landowners the equipment to establish and manage quail habitat**

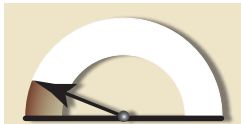
Many landowners across Kentucky own land, but lack

the farm equipment or specialized tools needed to create and manage quail habitat.

### ASSESSMENT:

Employ 4 strategies within 10 years.

## CHALLENGE 9:



**CHALLENGE 9  
5 YEAR SCORE**  
1/8 = 12.5%

**Involve non-hunting groups and the public**

Quail management and restoration is obviously focused on the quail-specific user groups that are often

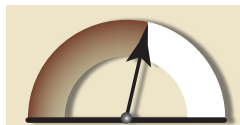
comprised of the hunting public. However, targeting non-hunting user groups who share an interest in songbirds and other wildlife can be an effective approach.

### ASSESSMENT:

Employ all strategies within 5 years.

## CHALLENGE 10:

**Provide additional training for staff**  
Many Department employees are unfamiliar



**CHALLENGE 10  
5 YEAR SCORE**  
4/7 = 57%

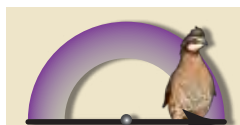
with quail habitat and the strategies to restore it. With so few staff to cover the state, it's imperative that all field staff can communicate the

basic message.

### ASSESSMENT:

Employ all strategies within 3 years.

## CHALLENGE 11:



**CHALLENGE 11  
5 YEAR SCORE**  
9/9 = 100%

**Build relationships with partners**

The crux of quail restoration will be founded on partnerships. Existing partnerships with non-government

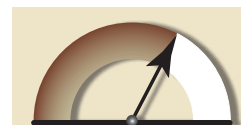
organizations (NGO) and fellow agencies must be enhanced. Personal relationships will be the key to landscape level change, so countless new partnerships must be forged to meet the objective.

### ASSESSMENT:

Employ all strategies over a 10 year period; generating 25 partner agencies and organizations.

## CHALLENGE 12:

**Design or plan developments in an environmentally-sensitive manner**



**CHALLENGE 12  
5 YEAR SCORE**  
2/3 = 66%

**Environmentally-sensitive manner**

In many circumstances, for every acre of quail habitat restored, an acre is destroyed. Easements, development plans, and

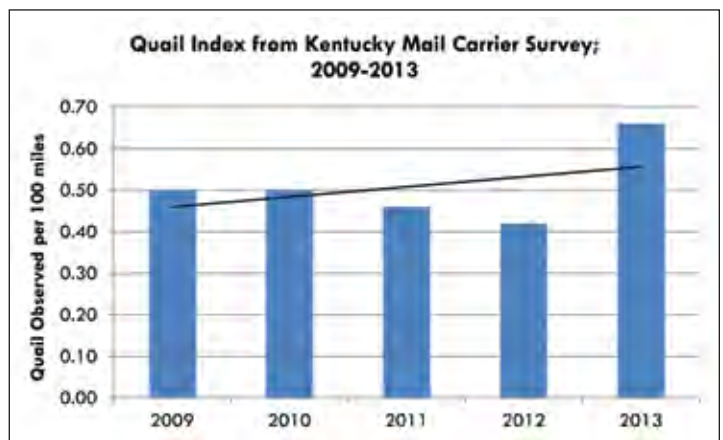
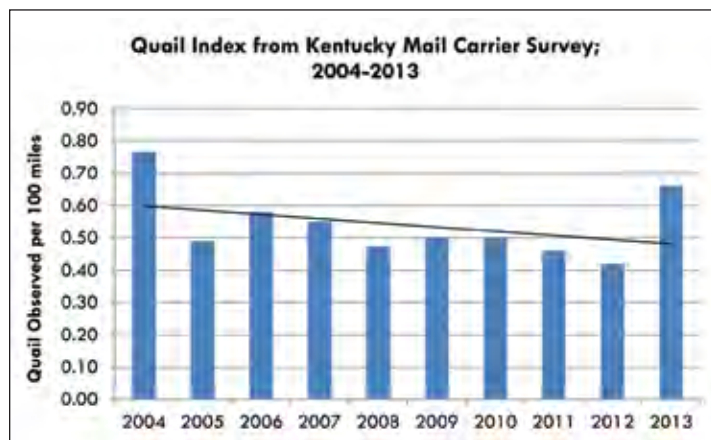
public rights-of ways are essential components to protect the future of bobwhite. To stabilize the statewide population, development must be carefully planned and critical habitats must be protected.

### ASSESSMENT:

Employ 3 strategies over 10 years.

## GOAL I OVERALL ASSESSMENT:

The trend over the last 10 years remains negative reflected by the statewide mail carrier survey (see figures below). Implementation of strategies over the last 5 years are likely not at the extent needed to stabilize the population.





## GOAL 2

### Increase bobwhite populations in focus areas



BEN ROBINSON PHOTO

#### CHALLENGE 1:

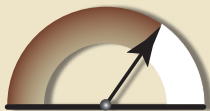
##### Adequately support focus areas

For a successful focused approach, funding and manpower must be secured. A focus area will not be established until a dedicated biologist and habitat team is in place. A formal public ceremony will take place at the start of each focus area.

##### ASSESSMENT:

Employ all strategies in 2 focus areas in 5 years.

##### CHALLENGE 1 5 YEAR SCORE



Livingston: 7/10 = 70%



Shaker Village: 4/10 = 40%



Hart Co: 1/10 = 10%

Initiate all focus areas in 8 years.

#### CHALLENGE 2:

##### Generate landowner interest

Many farmers and landowners may be unaware of a focus area encompassing their property. It is important to educate the public on our focus area approach, programs, management strategies, and funding sources. Local staff should also be included and be knowledgeable on current issues.

##### ASSESSMENT:

Employ 5 strategies on 2 focus areas in 5 years. Employ a minimum of 5 strategies in 10 years on remaining focus areas.

##### CHALLENGE 2 5 YEAR SCORE



Livingston: 3/5 = 60%



Shaker Village: 4/5 = 80%



Hart Co: 1/5 = 20%

#### CHALLENGE 3:

##### Lack of monitoring

Monitoring is essential to determine the level of success within a focus area. Density estimates will be needed to measure the magnitude of effect in the focal area, but indices can also be utilized for comparison with statewide trends.

##### ASSESSMENT:

Employ monitoring plan in 1 year for two focal areas. Employ monitoring plan by year 6 for remaining area.

##### CHALLENGE 3 5 YEAR SCORE



Livingston: 100%



Shaker Village: 100%



Hart Co: 100%

### GOAL 2 OVERALL ASSESSMENT:

The Hart County Focal Area met the goal of at least two-fold increase of bobwhite abundance. The Shaker Village Focal Area was just under the goal, and it will likely achieve that goal within the next 5 years.

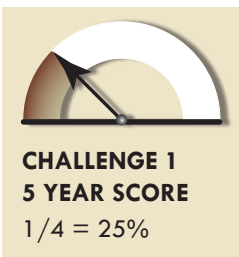
# GOAL 3

## Increase bobwhite populations on focal wildlife management areas



JOHN BRUNJES PHOTO

### CHALLENGE 1:



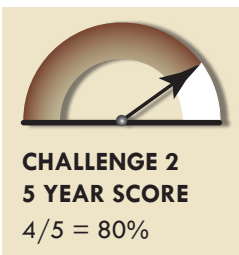
**Renovate public wildlife management areas (WMA)**  
Kentucky has over 1.5 million acres of public land available for hunting and wildlife-

related recreation. However, many of these areas cannot sustain abundant quail populations. KDFWR can manage some WMAs specifically for early successional grassland wildlife.

#### ASSESSMENT:

Create WMA management plans in 2 years. Implement plans over the following 8 years.

### CHALLENGE 2:



**Increase focal WMA staff**  
Many public lands WMAs around the state are under staffed. Existing staff do not have time to implement proper

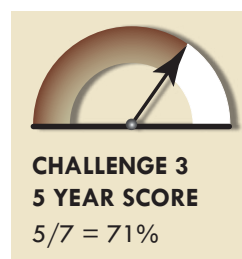
quail management on these areas.

#### ASSESSMENT:

Employ a minimum of 2 strategies on 3 focal WMAs in 5 years. Employ 2 strate-

gies on remaining WMAs in 10 years.

### CHALLENGE 3:



**Purchase necessary equipment**  
Many WMAs lack the necessary equipment needed to implement quail manage-

ment. Specialized equipment can increase the efficiency and effectiveness of management practices.

#### ASSESSMENT:

Employ all strategies within 3 years.

### CHALLENGE 4:



**Control hunting pressure on WMAs**  
Excessive hunting pressure may increase quail winter mortality and suppress populations on WMAs. Hunter

numbers tend to be extremely high on public lands and habitat availability is not adequately expansive. Therefore, coveys can be decimated over the course of a season.

#### ASSESSMENT:

Employ a unique hunting framework on each focal WMA within 3 years. Sum-

marize social and biological impacts to controlled hunting in 5 years.

### CHALLENGE 5:



**Enhance habitat on surrounding private property**  
Quail population management can require thousands of acres. Minimum viable populations (MVP)

are believed to be sustained by a minimum of 5,000 acres of suitable habitat. West Kentucky and Clay WMAs are marginal in size with respect to the MVP. Targeting private lands surrounding the WMAs will provide significantly more acres to support a population.

#### ASSESSMENT:

Employ all strategies within 3 years.

### CHALLENGE 6:



**Lack of monitoring**  
\*See focus area monitoring under Goal 2.

focal WMAs in 1 year.

**ASSESSMENT:**  
Employ monitoring plan on all

## GOAL 3 OVERALL ASSESSMENT:

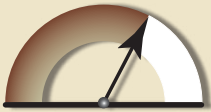
Monitoring data on all focal wildlife management areas are showing increases in bobwhite abundance. Specific abundance targets need to be derived, so success can be determined in year 10.



## GOAL 4

### Increase statewide recreation related to bobwhite

#### CHALLENGE 1:



**CHALLENGE 1  
5 YEAR SCORE**  
4/6 = 66%

#### Provide positive hunting experiences

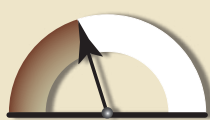
As fewer sportsmen and women participate in quail hunting, the need arises for positive hunting

experiences. The objective will be to renew interest in veteran bird hunters and recruit new participants in quail hunting.

#### ASSESSMENT:

Employ all strategies within 5 years.

#### CHALLENGE 2:



**CHALLENGE 2  
5 YEAR SCORE**  
2/5 = 40%

#### Renew aesthetic interest in quail

People are losing interest in quail, because they are not as prominent in the landscape. We must revitalize the image of the

### GOAL 4 OVERALL ASSESSMENT:

Hunter cooperators participation has not increased. We need to pursue a periodic quail hunter survey to assess participation and opinions.

bobwhite and generate broad-based interest.

#### ASSESSMENT:

Employ all strategies within 5 years.

## GOAL 5

### Generate funding mechanisms to support bobwhite restoration



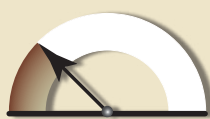
BEN ROBINSON PHOTO

with long-term maintenance expenses. It will be critical to secure funding sources to help offset the costs.

#### ASSESSMENT:

All strategies should be employed in 5 years.

#### CHALLENGE 2:



**CHALLENGE 2  
5 YEAR SCORE**  
1/4 = 25%

#### Compile project list for potential philanthropists

Many organizations have charitable funding in place, but they are unaware of projects and their

priority. Projects should cover a broad spectrum of costs and be well distributed

### GOAL 5 OVERALL ASSESSMENT:

Over the last 5 years, we've secured roughly \$500,000 in outside support for the implementation of the plan. This is well below the target of \$7.5 million. The Department made significant investments to jumpstart quail restoration, but substantial financial commitments must be made in the next 5 years. Otherwise, the plan will fail.

across the state, so donors can support local needs within their budget.

#### ASSESSMENT:

All strategies should be employed within 1 year.

#### CHALLENGE 1:



**CHALLENGE 1  
5 YEAR SCORE**  
3/7 = 43%

#### Garner funding for quail restoration

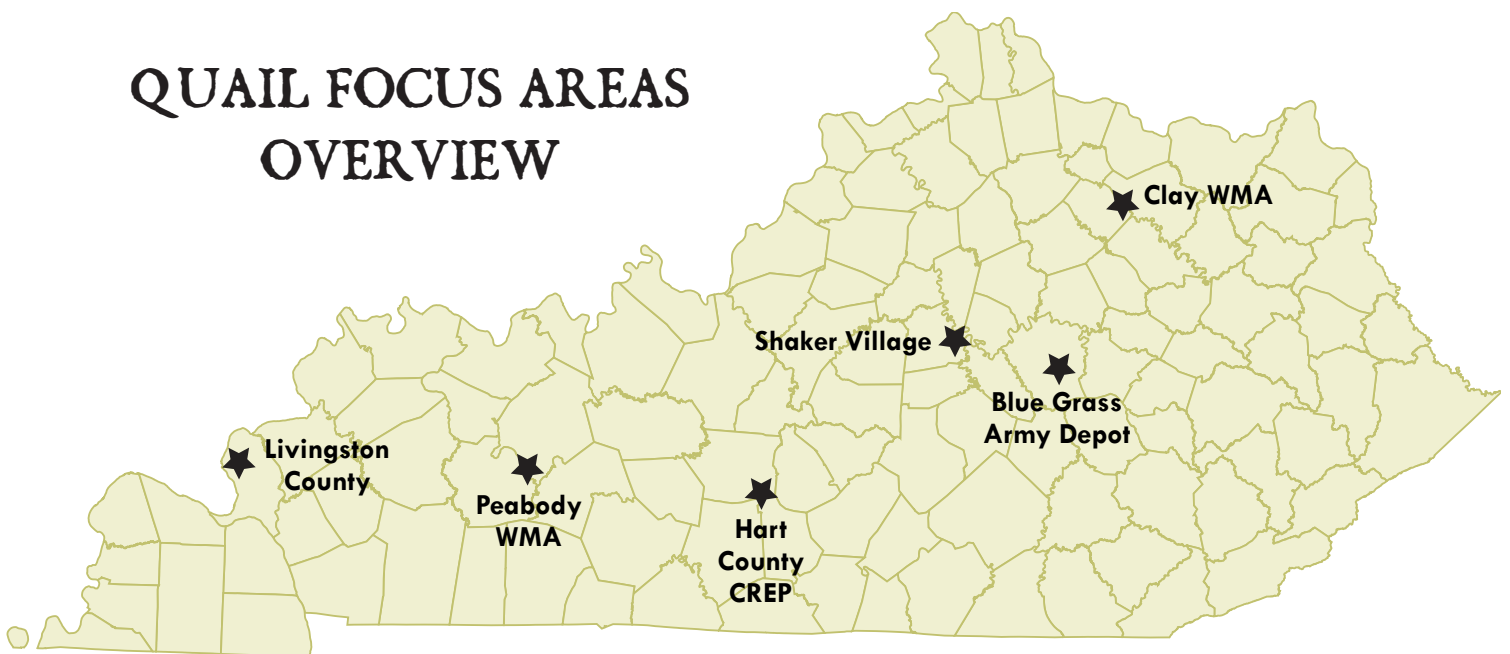
Quail restoration and management is expensive. Restoring habitat requires initial investments coupled

# FOCUS AREAS



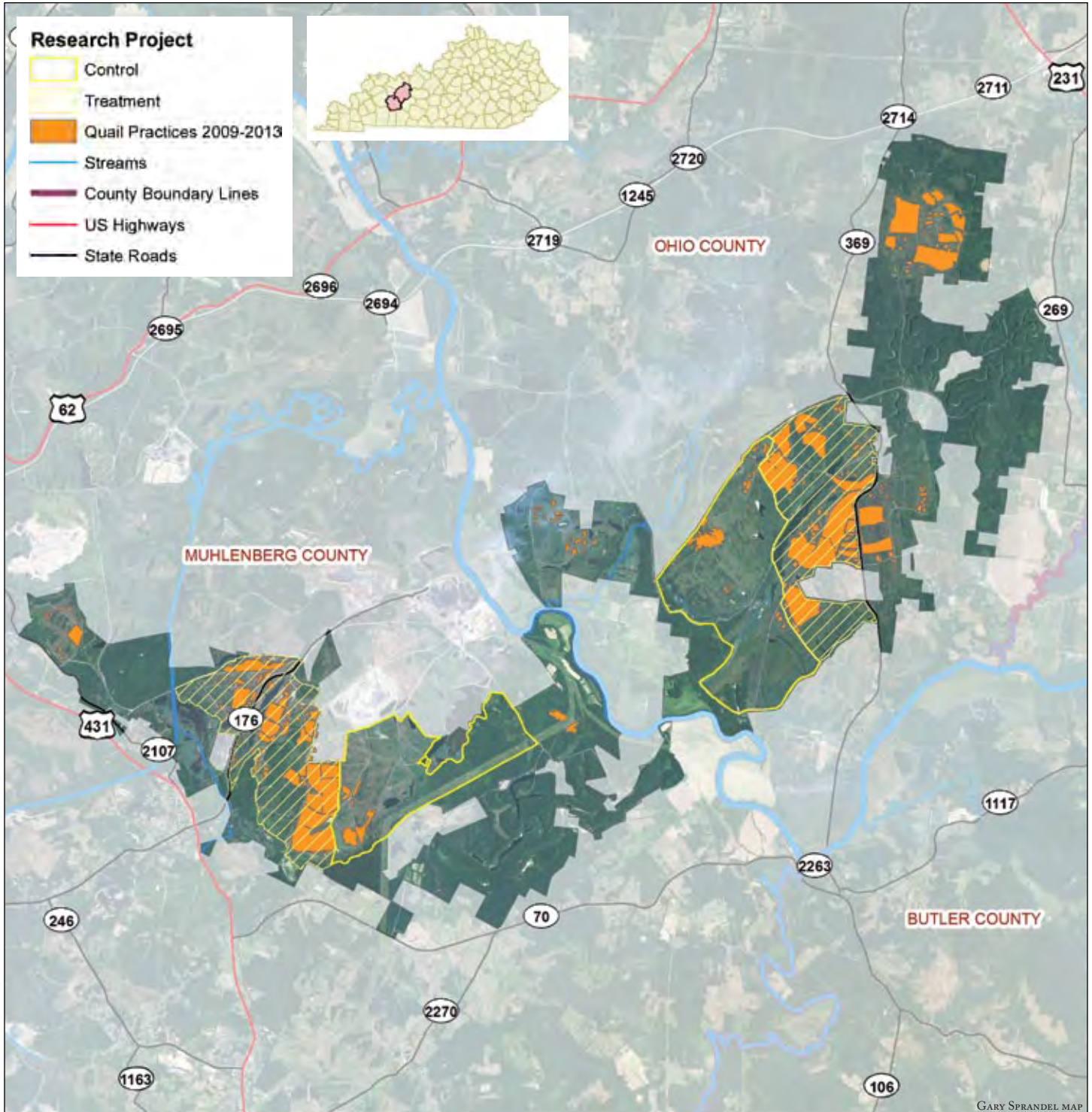
BEN ROBINSON PHOTO

## QUAIL FOCUS AREAS OVERVIEW





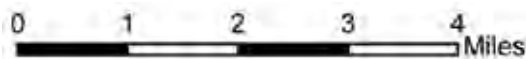
# PEABODY WMA, Eastern KDFWR-owned tracts



21,860 Acres  
 2,087 Acres practices  
 56% Increase in  
 Northern Bobwhite



1:120,000



# PEABODY WMA, Eastern KDFWR-owned tracts



BEN ROBINSON PHOTO

Peabody WMA team, left to right: Jeremiah Thresher, Jordon Williams, Will Beals, Jennifer Chancey, Ross Ketron, Drew Van Cleve, Boyd Cartwright, Jarrod Arnold and Eric Williams. Not pictured: Freddie Adkins, Chrissy Henderson and Rob Meyer.

PRACTICE	2009	2010	2011	2012	2013	TOTAL
Controlled Burning	425.3	0.0	603.7	87.3	685.1	1801.4
Disking	42.3	376.9	177.0	259.0	256.4	1111.6
Herbicide Application	0.0	0.0	350.3	0.0	45.8	396.2
Planting	0.0	0.0	93.8	17.9	0.0	111.7
Unique acres managed/year	448	377	978	340	920	

QUAIL PROJECT HOURS	2009	2010	2011	2012	2013	2014	TOTAL
	1,737	2,327	1,276	1,669	1,434	1,048	9,489

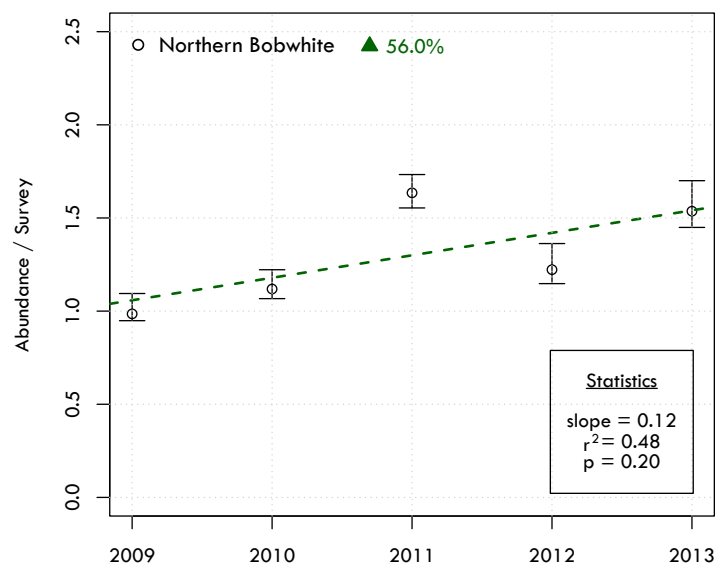


*"I started hunting Peabody about 7 years ago when I got Rascal, my first bird dog. I didn't have a lot of luck finding birds the first couple of years. I would jump a covey of birds about twice a year. I got drawn for one of the Peabody quota hunts where a lot of the quail management work was performed. I learned of the efforts the Peabody staff were taking to increase the quail population. After the hunt, I could truly see how much work had been done and how much it helped the quail population. I got into 3 large coveys of birds that day. That was the first time I had seen that many birds in Kentucky. I was excited for the Sinclair unit to reopen to public hunting again after the hard work and dedication that was put into the area. I have hunted the unit several times since it reopened and I have always put up birds. I know the Department of Fish and Wildlife is working hard to bring back small game just like they have developing the deer, turkey, and elk population. Thanks to everyone involved in bringing back small game in Kentucky, it gets more exciting every year!"*

— Dee Meeks  
Upland Bird Hunter

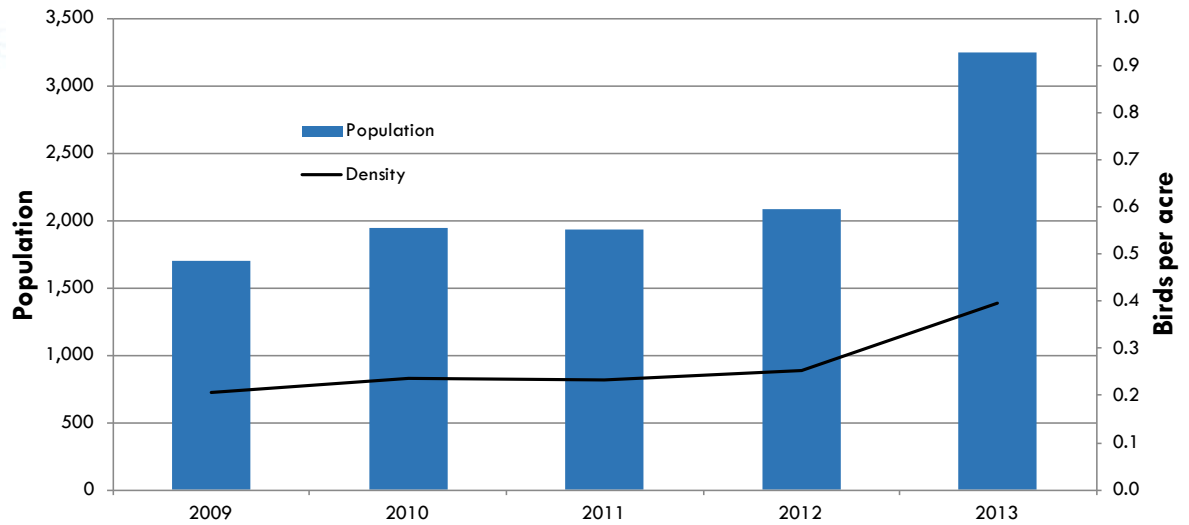
## PEABODY WMA: BOBWHITE RESPONSE

The Peabody WMA Quail Focus Area experienced positive gains in bobwhite abundance over a five year period. Peabody WMA is our only reclaimed mineland focus area and this type of landscape brings about its own set of challenges. Controlled burning and disking have been the primary habitat management techniques used at Peabody. A combination of research and hands-on experience leaves us anticipating greater gains as we move forward. It is important to note that the research design left much of the area off-limits for habitat management which leaves a great deal of potential moving forward.





**PEABODY WMA NORTHERN BOBWHITE FALL COVEY COUNT POPULATION ESTIMATE, 2009-2013**

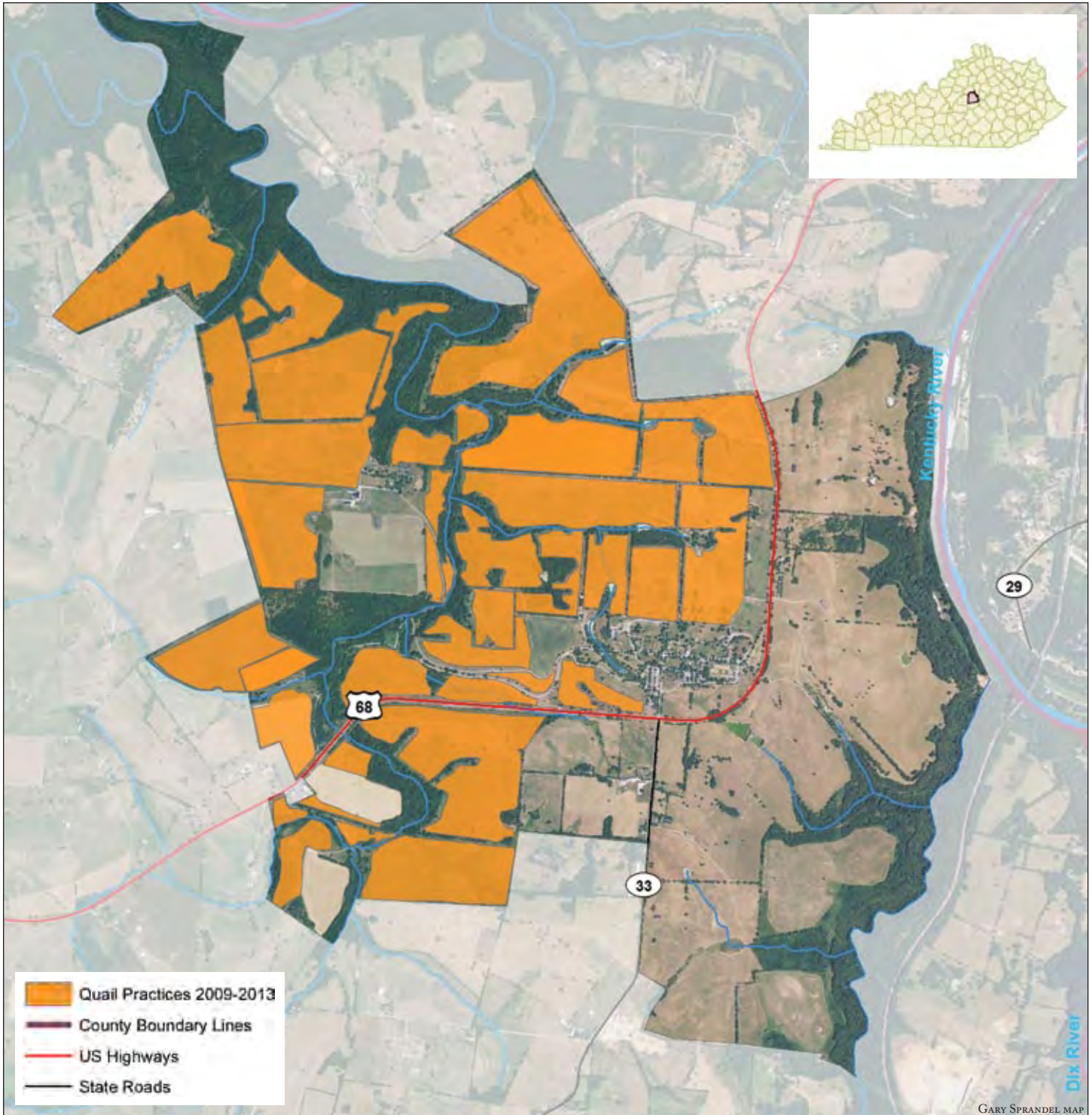


	Sinclair Unit	Ken Unit	TOTAL
<b>TRAPPING</b>			
New captures 2009 - 2014	954	1,061	2,015
Recaptures 2009 - 2014	788	697	1,485
Total captures	1,473	1,476	2,949
Trapping Success	2.1%	1.8%	2.0%
<b>TELEMETRY</b>			
Total collared individuals	704	833	1,537
Telemetry locations	16,874	18,096	34,970
<b>NESTING</b>			
Nests since 2009	59	69	128
Clutch size	12.9	13.4	13.1
Nest survival	35%	35%	35%
<b>SEASONAL SURVIVAL</b>			
Non breeding	27%	29%	28%
Breeding	14%	16%	15%
<b>HOME RANGE AND MOVEMENT</b>			
Average daily movement (non breeding)	114 m	140 m	127 m
Average daily movement (breeding)	116 m	136 m	136 m
Average home range size (non breeding)	33 ha	51 ha	43 ha
Average home range size (breeding)	54 ha	77 ha	65 ha

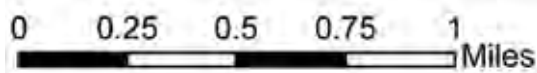
CROP CONTENTS	Percent of Crops
Empty	14.9
<b>Non-seed material</b>	
Leafy matter	34.7
Rock	5.9
Dirt	3
Tree bark	1
Feather sheathing	1
<b>Seeds</b>	
Sericea lespedeza	28.7
Common ragweed	23.8
Sunflower	17.8
American pokeweed	11.9
Black locust	9.9
Sumac	8.9
Unknown seed	8.9
Grain sorghum	7.9
Autumn olive	5
Sumpweed	4
Giant foxtail	4
Pigweed	3
Corn	2
Japanese honeysuckle	2
Wheat	2
Honey locust	1
Pine	1
<b>Insects</b>	
Unknown insect	5
Slug	2
Snail	1
Grasshopper	1

- There were more bobwhite on PWMA than we thought, and there are even more now
- Bobwhite die more in the summer than the winter on PWMA
- Mammals seem to be the top predator
- Some birds move a lot, others not so much
- They don't like thick grass, but they will use it when we disk it.
- The quail are amazingly elusive when they encounter hunting dogs
- The lack of shrub cover limited where birds were found on PWMA
- Birds rarely ventured more than 100 meters from shrub cover, especially during the winter
- Adults and broods used firebreaks planted to winter wheat extensively during the summer
- Broods were commonly found in disk blocks

# SHAKER VILLAGE QUAIL FOCUS AREA



2,855 Acres  
1,027 Acres practices  
150% Increase in  
Northern Bobwhite







BEN ROBINSON PHOTO

Shaker Village team, left to right: John Brunjes, Terri Estes, Don Pelly, Ben Leffew and Ben Robinson. Not pictured: John Morgan.

PRACTICE	2009	2010	2011	2012	2013	TOTAL
Controlled Burning	291.0	84.0	375.0	300.0	295.0	1,345.0
Herbicide Application	699.0	275.5	121.0	129.0	192.0	1,416.5
Mowing	408.0	17.0	6.0	93.0	35.0	559.0
Planting	514.0	36.0	121.0	93.0	35.0	799.0
Unique acres managed/year	699	290	381	429	487	



*“With the conversion of approximately 1,200 acres of our marginal farmland to NWSG and wildflowers we anticipated an increase in our songbird and Northern Bobwhite Quail populations. But I had no idea that the difference in our pre- and post-conversion population surveys would show such a tremendous increase.”*

— Don Pelly  
Shaker Village Property Manager

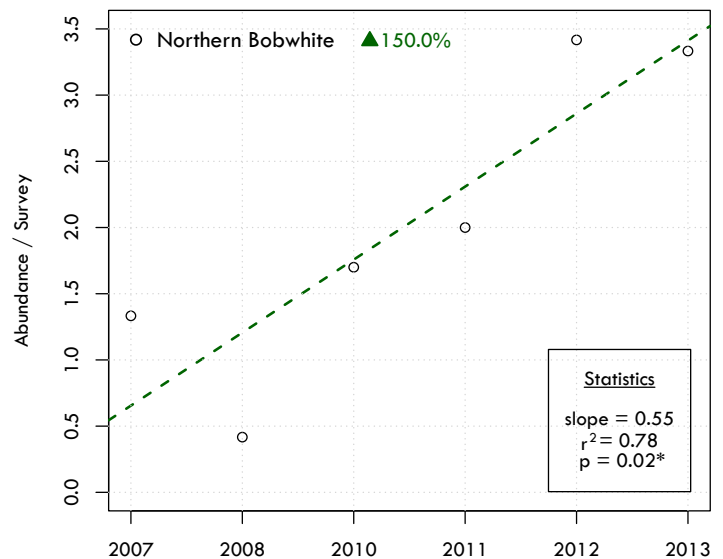
*“Since Fall 2011, I have been helping, under the supervision of Don Pelly, locate coveys of quail at Shaker Village. I have guided groups of hunters for three or four days, plus I have photographed some of the hunts. I have seen an increase in bird population on the property. One morning last September, with a couple of dogs, we moved 6 coveys before 10 o’clock.*

*We have a farm about 5 miles (bird flight) from Shaker Village and we have seen an increase in bird calling and coveys at our farm.”*

— Philippe Roca  
Febus Farm

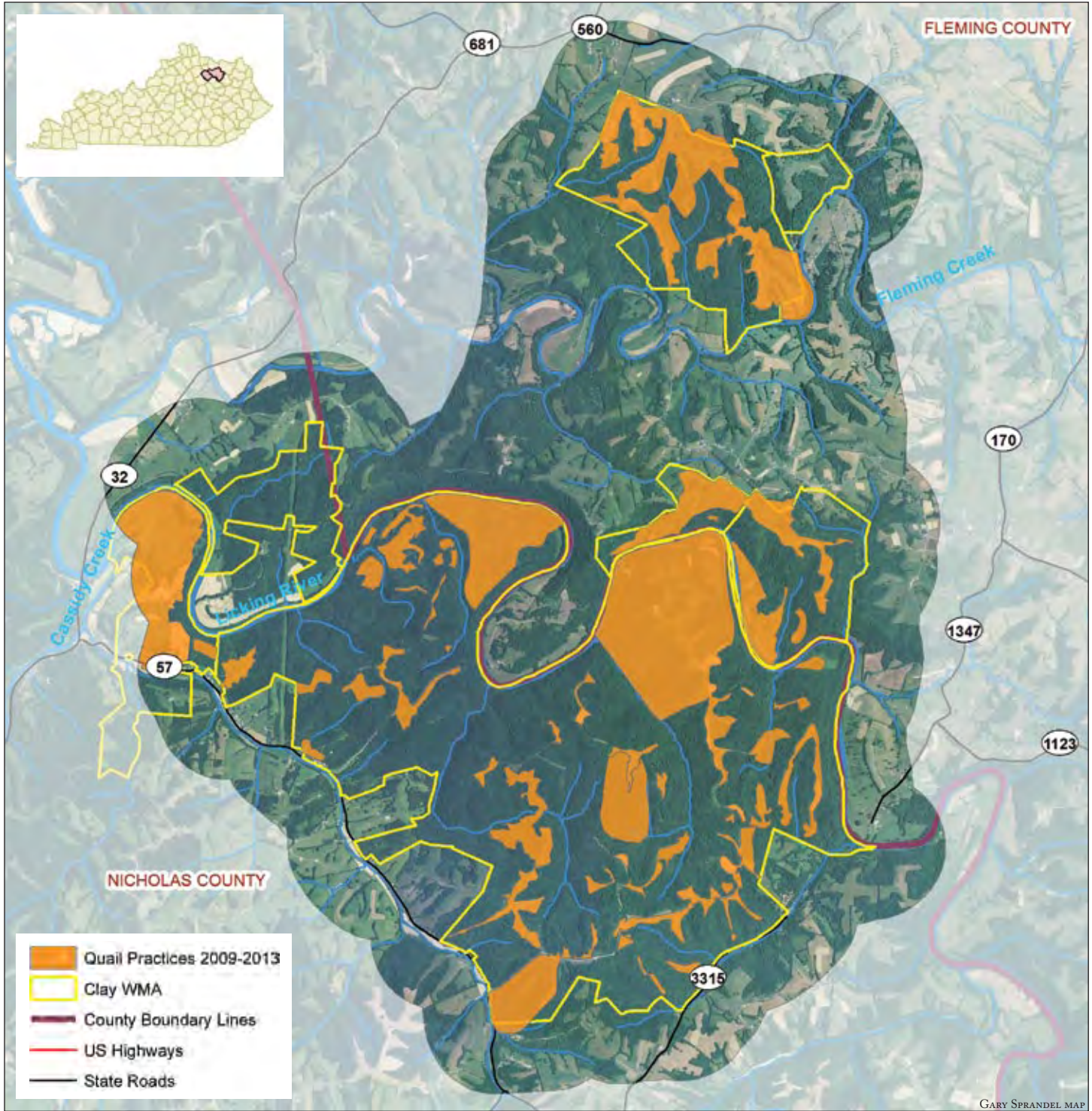
## SHAKER VILLAGE: BOBWHITE RESPONSE

The Shaker Village Quail Focus Area experienced excellent bobwhite growth over a seven year period. Nearly 1,000 acres of contiguous habitat is on the ground. In order to capture the impressive gains, we were forced to look at a separate dataset for this area. Other focus areas followed our standardized quail focus area monitoring protocol. While this survey was active at Shaker Village, it did not begin until after our first population explosion. We essentially missed the major growth spurt. Fortunately, we had a second survey in place (Partners In Flight) which allowed us to analyze data prior to the habitat conversions. Controlled burning continues to be the primary management tool in place at Shaker Village.

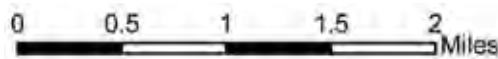




# CLAY WMA QUAIL FOCUS AREA



15,416 Acres  
2,223 Acres practices





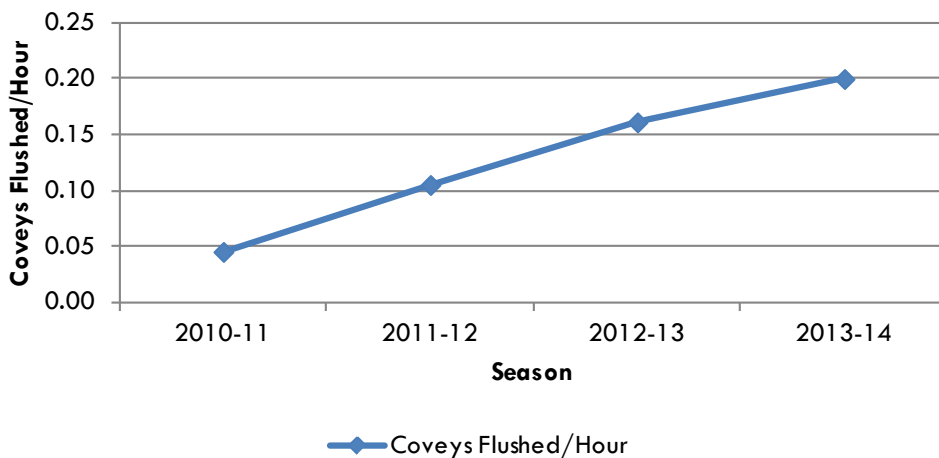


BEN ROBINSON PHOTO

Clay WMA team, left to right: Brian Wagoner, Jacob Stewart and Nathan Gregory.

PRACTICE	2009	2010	2011	2012	2013	TOTAL
Controlled Burning	400.0	303.0	200.0	176.0	367.0	1,446.0
Disking	37.5	30.7	0.0	0.0	19.2	87.4
Herbicide Application	628.0	560.0	30.0	250.0	275.0	1,743.0
Planting	100.0	65.0	20.0	42.0	122.0	349.0
Woody Control	72.0	71.0	26.0	130.0	177.0	476.0

**CLAY WMA COVEY FLUSH RATES; 2010-2013 QUOTA HUNTS**



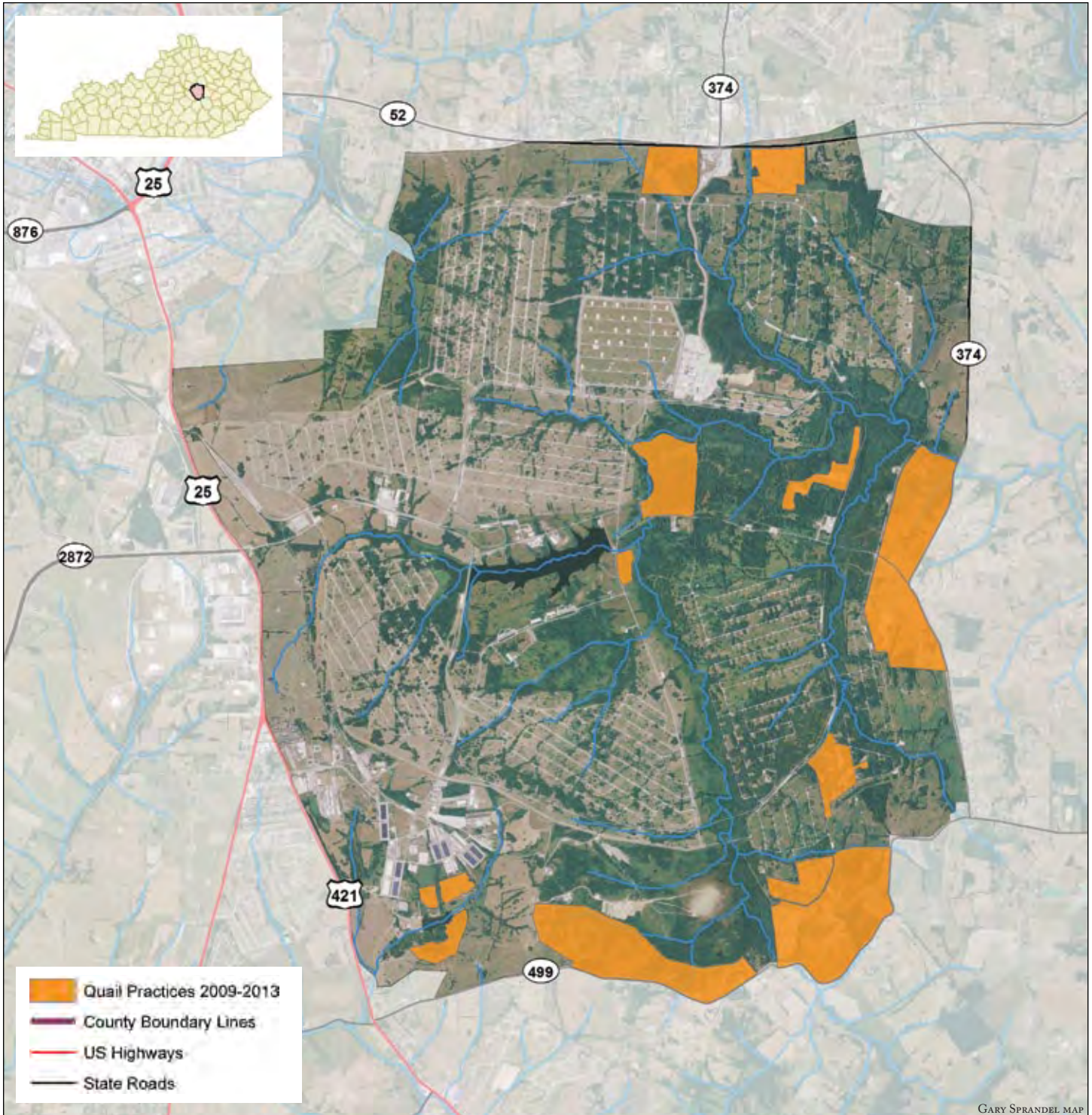
*"We have been fortunate to have hunted Clay WMA twice in both 2012 and 2013. Both years have been the best bird hunts that I have been on in over 20 years of bird hunting. We have had multiple quail covey flushes on both hunts and then several 1 to 3 bird flushes following that. On top of that we also flushed several woodcock. The coveys almost always seemed to come from or near the warm season grass fields that have been established through planting and burning. The coveys came up in almost exactly the same spots both years. It has been a life-long dream to actually be able to hunt a wild covey of quail. Thanks for that! Management does make a difference."*

— Floyd Willis  
Upland Game Hunter

*"I just wanted to express that our party of 3 hunters, 1 photographer, and 2 dogs had a great morning afield on December 17, 2013. We found two different coveys of quail on the Marietta-Booth Tract and were able to harvest 3 birds (2 males and 1 female). Multiple single flushes containing 1-3 birds were also raised from these coveys. I want to compliment you and your staff on the habitat work that is present on this tract. The habitat for upland birds and small mammals looks outstanding. Food sources and escape cover abound. Several rabbits and numerous songbirds were seen during the hunt as well. Deer sign was also prevalent throughout the areas that we covered. Keep up the excellent habitat work and thanks for helping us make an enjoyable memory that included good friends, happy hunting dogs, and a pleasant population of birds."*

— Kevin Galloway  
Upland Game Hunter

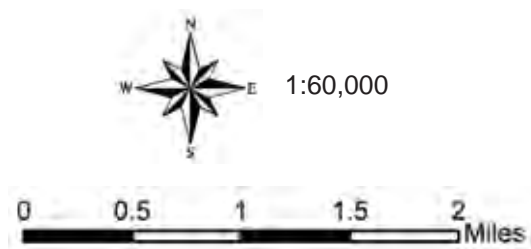
# BLUEGRASS ARMY DEPOT QUAIL FOCUS AREA



GARY SPRANDEL MAP



**14,517 Acres**  
**1,313 Acres practices**  
**52% Increase in Northern Bobwhite**







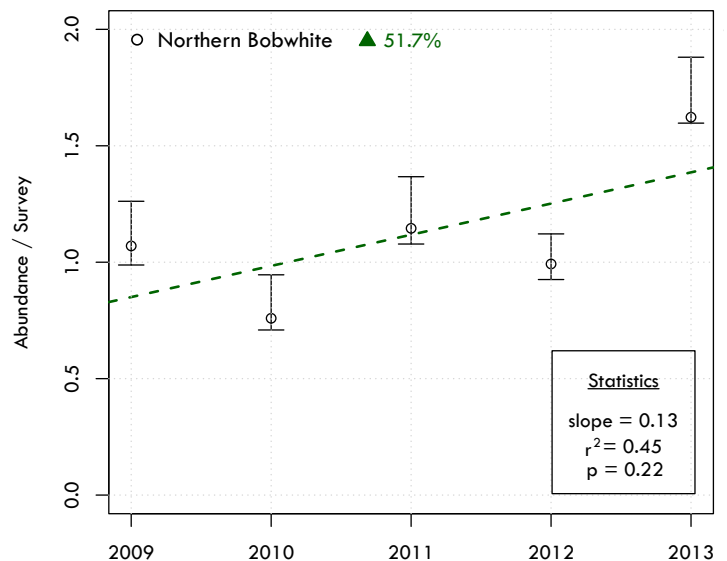
TOM EDWARDS PHOTO

Bluegrass Army Depot team, left to right: Marcia Schroder, KDFWR Wildlife Technician; Kenny Combs, BGAD Maintenance Mechanic; Tom Edwards, KDFWR Wildlife Biologist; Colonel Lee G. Hudson, BGAD Commander; Steve Sharp, BGAD Deputy Commander; Nathan White, BGAD Land Manager.

PRACTICE	2009	2010	2011	2012	2013	TOTAL
Controlled Burning	973.9	1,299.70	483.6	803.9	277.4	3,838.5
Disking	0.0	0.0	5.0	5.0	5.0	15.0
Grazing (Cattle)	257.3	566.3	841.3	841.3	257.3	2,763.5
Herbicide Application	3.0	26.0	55.0	78.0	73.0	235.0
Planting	7.0	30.0	59.0	80.0	35.0	211.0
Woody Control	0.0	0.0	20.0	10.0	7.0	37.0
Unique acres managed/year	973.9	1,299.70	892	945	766	

## BLUE GRASS ARMY DEPOT: BOBWHITE RESPONSE

The Blue Grass Army Depot (BGAD) Quail Focus Area experienced a steady increase in bobwhite abundance over a five year period. Controlled burning has been the primary habitat management tool at BGAD with an average of 767 acres burned per year. The population gains at BGAD have been achieved using very limited resources. Most work has been accomplished by only two individuals. An increase in manpower could result in even greater gains moving forward. This focus area also has a heavy cattle grazing component. Research is currently in place at BGAD to determine what role livestock can play in the management of bobwhite. Anecdotal evidence from BGAD looks promising.



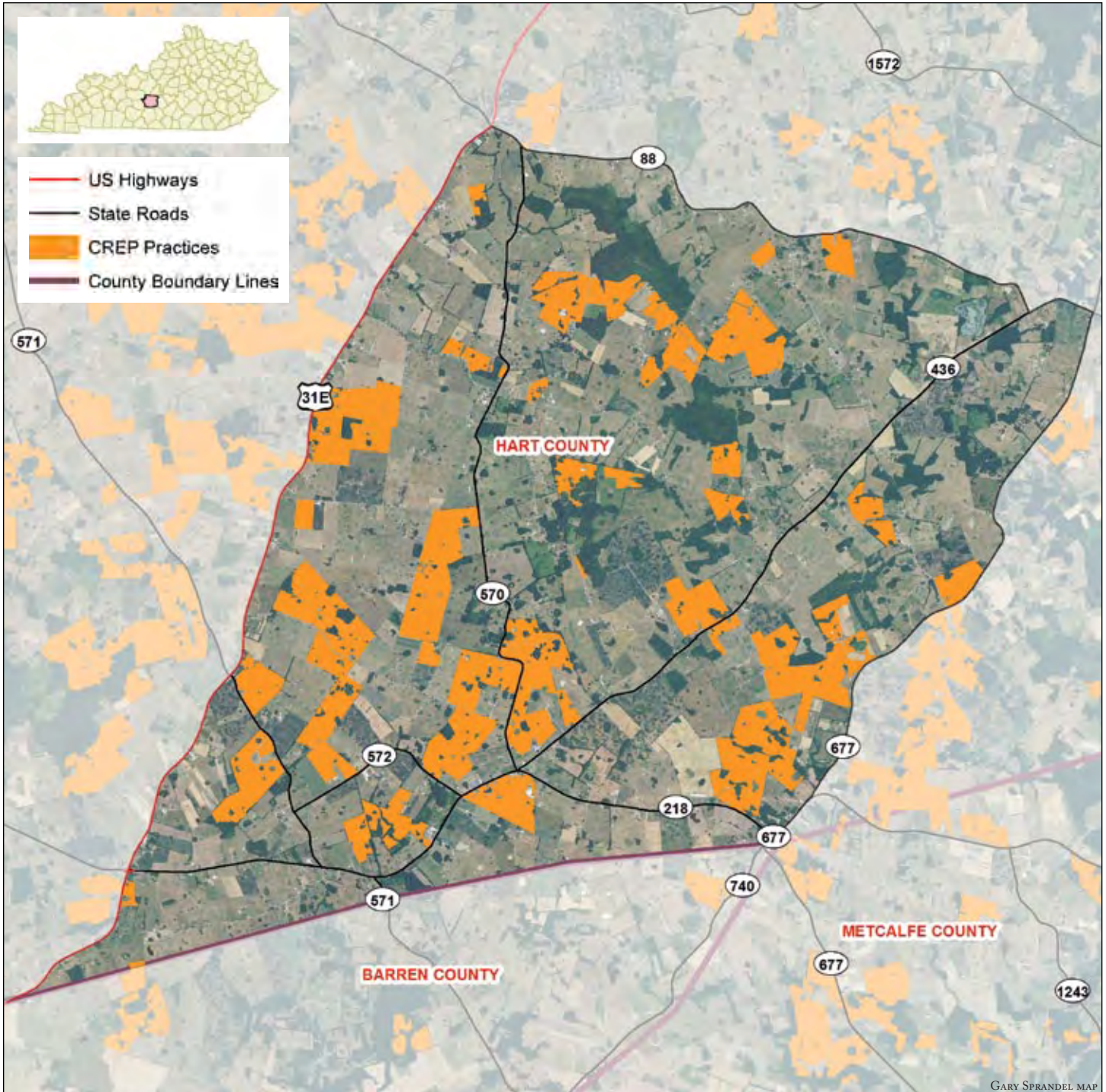
*“As the installation archaeologist and land manager, I spend a great deal of time in the field. Since I started at Blue Grass 12 years ago, I have noted a dramatic increase in bobwhite quail, both through sightings and through calls. I also get more and more phone calls from hunters asking if we will open quail hunts, as they can see and hear them from off-post. It is obvious that all the time and effort put forth by Tom Edwards and Marcia Schroder makes a big difference.”*

— Nathan White  
BGAD land manager

*“My duties as physical security specialist take me all over the installation. I started work here in 1999 and we rarely sighted quail anywhere on the installation. This year, for the first time, we have seen numerous coveys all over the depot while checking inner and outer fence lines. I appreciate all of the hard work put forth by Tom and Marcia.”*

— Michael Reynolds  
BGAD physical security specialist

# HART COUNTY CREP QUAIL FOCUS AREA



**19,827 Acres**  
**2,961 Acres practices**  
**779% Increase in Northern Bobwhite**  
**20% Increase in Northern Bobwhite**  
**in areas without practices**  
**44% Increase in areas with most**  
**practices**







BEN ROBINSON PHOTO

Side-oats grama and purple coneflower were often planted for Conservation Reserve Enhancement Program (CREP) fields in the Hart County Focus Area. They make excellent habitat for bobwhite and other wildlife.

PRACTICE	2009	2010	2011	2012	2013	TOTAL
Controlled Burning	0.0	0.0	0.0	0	0.0	0.0
Disking	0.0	0	190.9	12.3	12.5	215.7
Herbicide Application	0.0	0.0	0.0	0	345.9	345.9
Unique acres managed/year	0.0	0.0	190.9	12.3	358.4	



*“Bobwhites have picked up dramatically in the past five years around Hart County. We went through a decade or two when they were tough to find, then local farmers started seeding native grasses and forbs under the CREP program. That’s an acronym for something which I’ve forgotten, but the upshot is that as native plants and plenty of cover were restored, the birds returned quickly. They are once again easy to hear as we drive through the countryside... a nice conservation success.”*

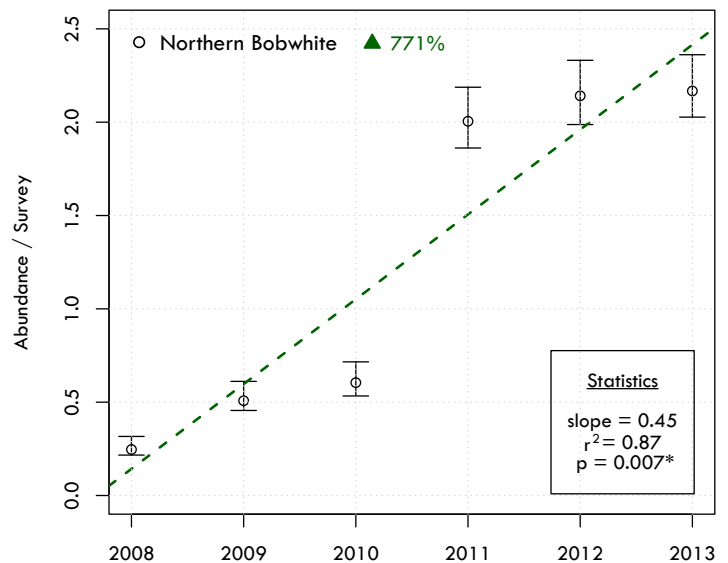
— Steve Kistler  
Kentucky Birder

*“I have both a short grass-native grass/ forb stand and a tall grass-native grass/ forb stand. Approximately 50 acres total. Both areas have been very beneficial to all wildlife on my farm but specifically I’m seeing and hearing more quail than ever.”*

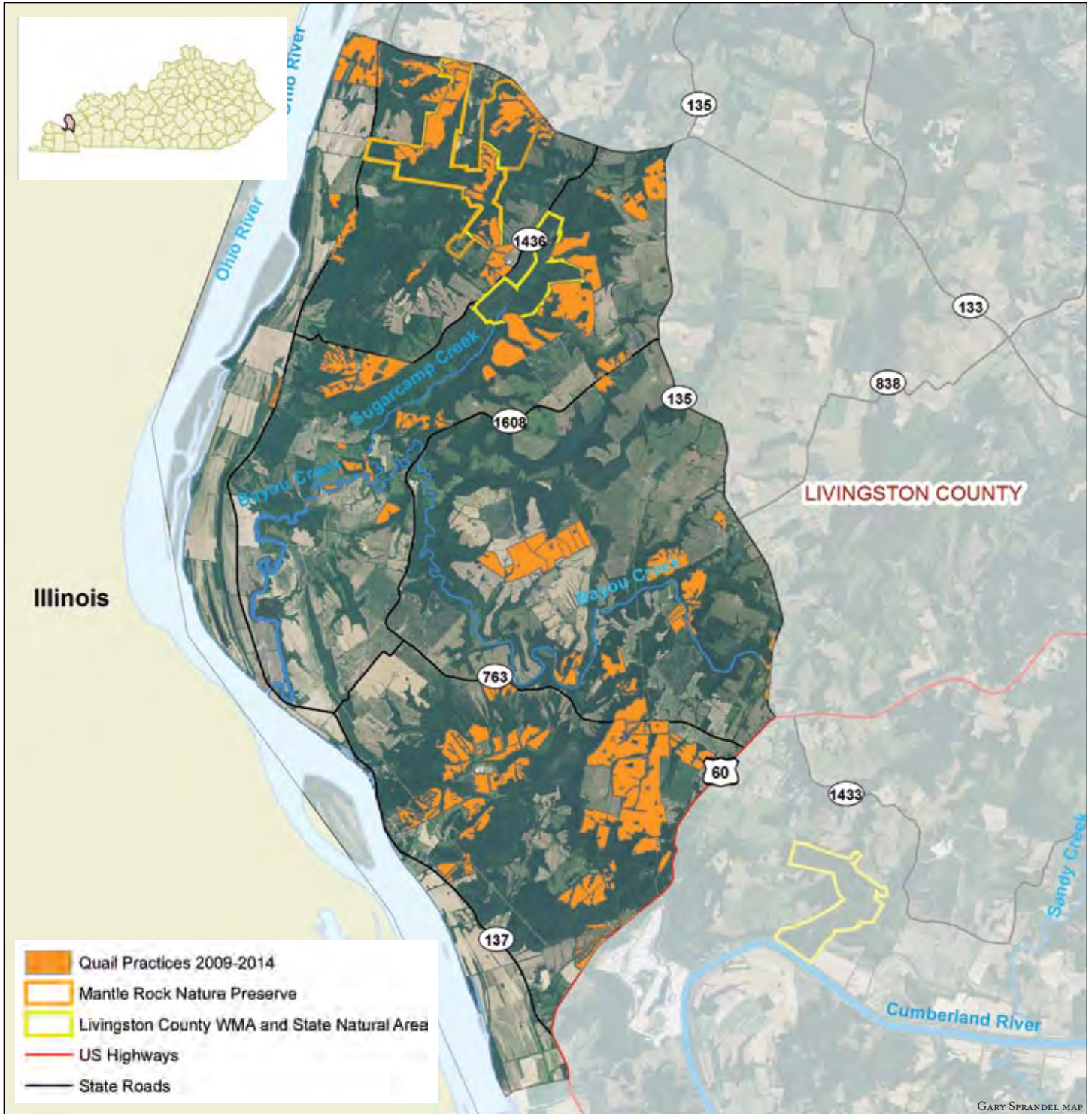
— Dan Porter  
Lead District Conservationist  
USDA-NRCS, Ohio County

### HART CO. CREP AREA: BOBWHITE RESPONSE

The Hart County Quail Focus Area saw the largest population increase of any Kentucky focus area over a five year period. The impressive gains can be directly tied to the large-scale habitat improvements brought about by the Conservation Reserve Enhancement Program (CREP). Short statured native grasses like little bluestem and sideoats gramma were planted within the focus area, along with a diverse wildflower mix. Extensive habitat was also centered outside the focal area boundary, potentially magnifying gains. The combination of cool-season grass eradication, native grass plantings, and bare ground across hundreds of acres proved to be the perfect recipe for bobwhite to thrive.



# LIVINGSTON COUNTY QUAIL FOCUS AREA



40,813 Acres  
 4,103 Acres practices  
 14% Increase in  
 Northern Bobwhite







BEN ROBINSON PHOTO

Livingston County team, left to right: Andy Radomski, Jason Scott, Philip Sharp, Shelly Morris, Pat Brandon, Robert Hoffman and Madeleine Pratt.

PRACTICE	2009	2010	2011	2012	2013	TOTAL
Controlled Burning	434.3	374.5	686.5	716.7	1,246.1	3,458.1
Disking	6.2	0.0	0.0	56.5	92.4	155.1
Herbicide Application	49.6	41.9	304.8	439.1	84.1	919.5
Mowing	0.0	0.0	12.3	23.0	26.9	62.2
Planting	172.6	330.1	891.8	63.4	62.7	1,520.6
Woody Control	23.5	0.0	412.1	409.9	1,216.4	2,061.9
Unique acres managed/year	632	702	1,733	1,268	2,128	

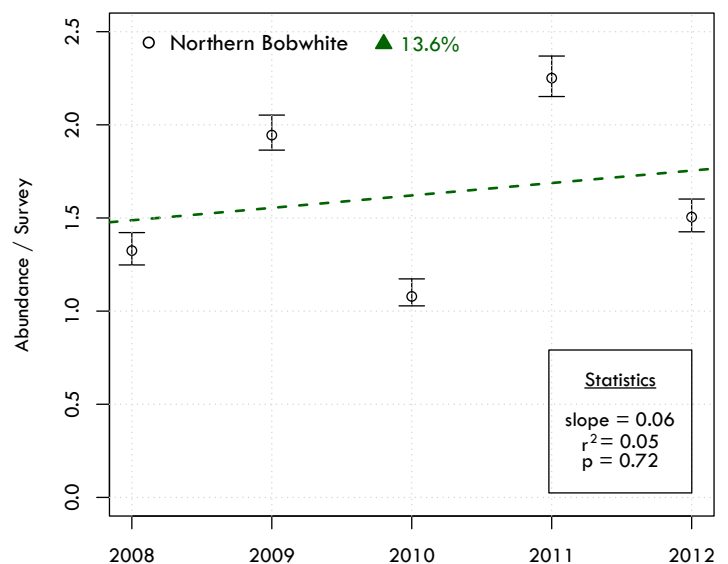


*“TNC has been very fortunate to have KDFWR as a partner in Livingston County. They have provided a great deal of assistance with early successional habitat management (fire, mechanical) on properties that we currently own as well as those that we have transferred over the years to Livingston County. They provide a great service to the landowners of Livingston County, particularly in the Quail Focus Area. The concentrated efforts that KDFWR has put forth in this area are definitely starting to show a positive result, not only for quail populations, but also migratory songbirds, small mammals, herps, and pollinators as well. It takes this kind of well planned, well implemented, and well focused restoration and management to gain a meaningful landscape scale benefit.”*

— Shelly Morris  
 Western Kentucky Project Director  
 The Nature Conservancy - Kentucky Chapter

## LIVINGSTON COUNTY: BOBWHITE RESPONSE

The Livingston County Quail Focus Area did not experience the population growth that other areas saw. This was likely the result of an initial focus area boundary design flaw. With more than 40,000 acres to manage, we realized that we could not show quick success across such a vast landscape. The area has since been scaled down to a much more manageable size and we expect to see more pronounced results moving forward. This area also represents the state’s first National Bobwhite Focus Area through the National Bobwhite Conservation Initiative.





**B**OBWHITE RESTORATION is much larger than Kentucky. The challenges facing the recovery of bobwhite are so daunting that no single state can tackle them independently. As a result, state fish and wildlife agencies, non-profit organizations, and universities formed a collaborative group entitled the National Bobwhite Technical Committee (NBTC).

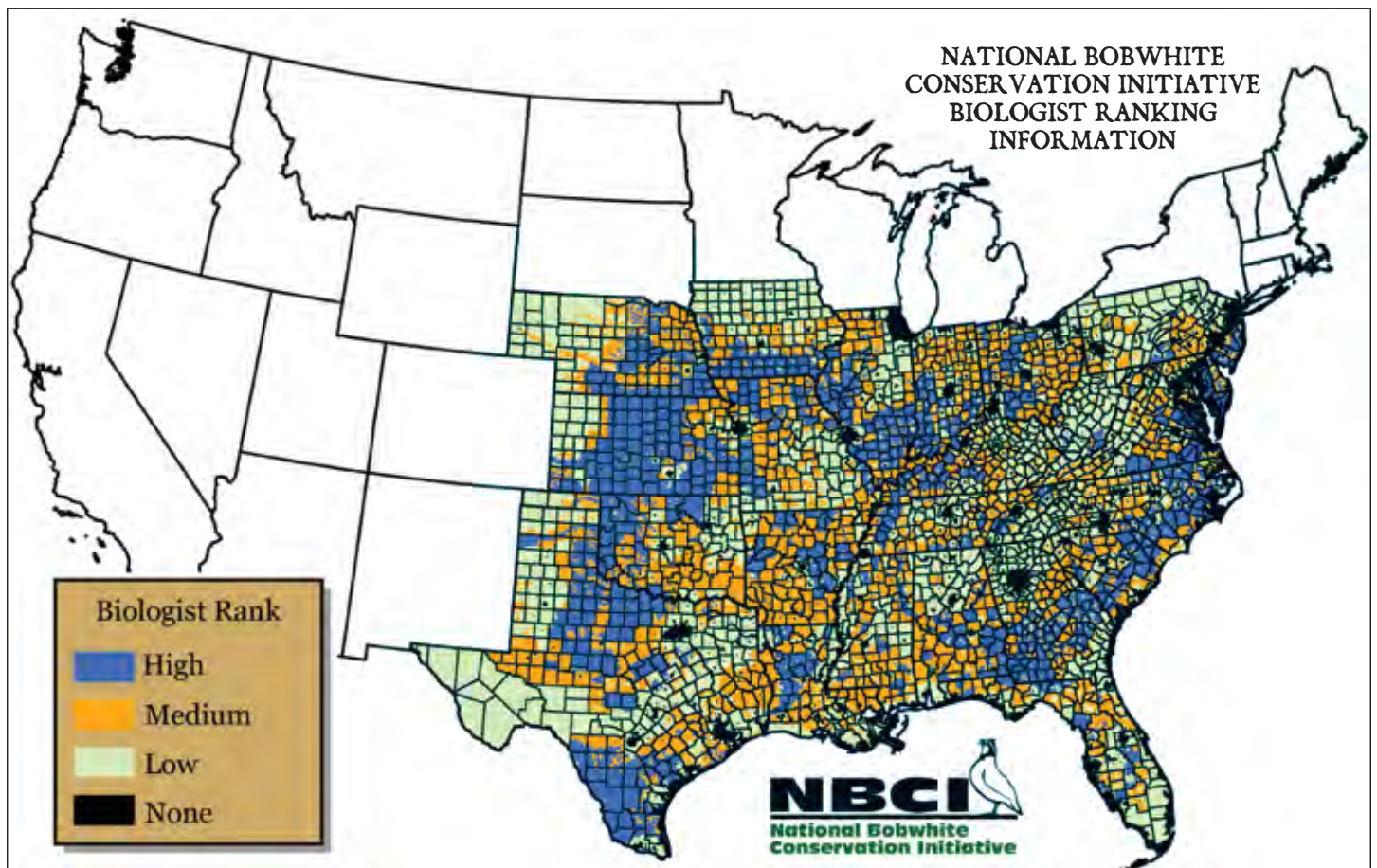
The NBTC has been a powerful force. The group completed the first ever range-wide restoration plan, The National Bobwhite Conservation Initiative (NBCI), in 2002. A revision was completed in 2011 generating the impressive map below. That

map was the product of over 600 biologists from across 25 states. The group has been responsible for the creation of the Habitat Buffers for Upland Birds (a Continuous Conservation Reserve Program practice through the Farm Bill), and they have been a national voice for bobwhite on agricultural policy for more than 2 decades. Over the last 3 years, the group has grown in number by adding dedicated staff, and the products are coming faster than ever.

One of those products is the NBCI Coordinated Implementation Program. The aim of the effort is to create a national template for restoring bobwhite. It establishes a

strategy of working within focal areas first and ramping efforts up to larger areas over time. The program has specific monitoring requirements for habitat and birds. By operating in a uniform manner, the power of collaboration will minimize each states input generating powerful proof of the connection between habitat and bobwhite.

Livingston County represents the Nation's first NBCI focal area. Kentucky is proud to be one of the country's leaders on the bobwhite restoration front. For more information on the NBTC and the NBCI, please visit their website ([www.bringback-bobwhite.com](http://www.bringback-bobwhite.com)).





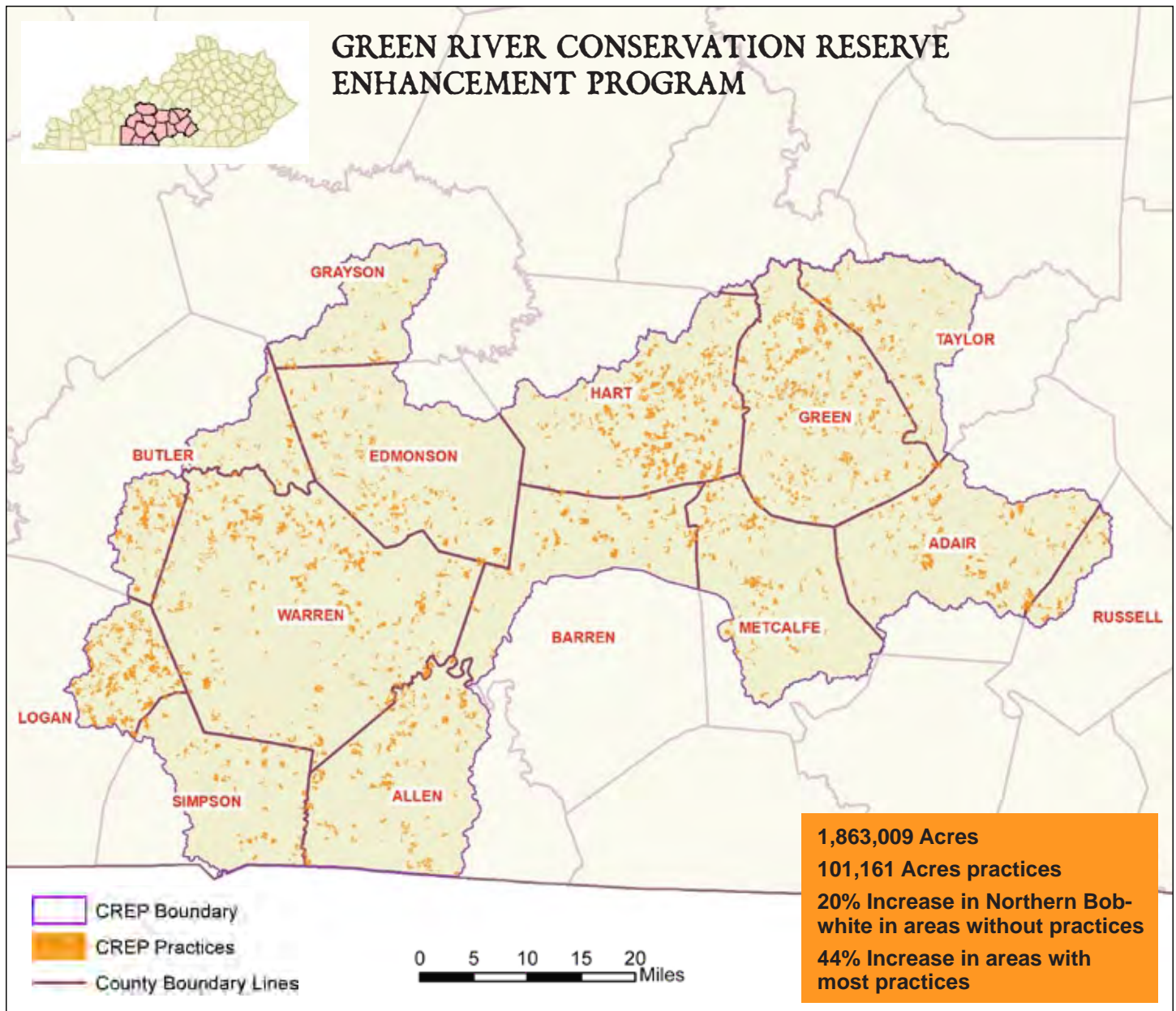
# CREP LANDSCAPE MONITORING INITIATIVE

**T**HE GREEN RIVER Conservation Reserve Enhancement Program is a partnership between the United States Department of Agriculture and the Commonwealth of Kentucky. The state, non-governmental organizations and federal collaboration resulted in an unprecedented grassland restoration project resulting in 101,500 acres almost

entirely planted to native grasses and wildflowers. The project area included Grayson, Edmonson, Hart, Green, Taylor, Adair, Metcalfe, Barren, Warren, Allen, Simpson, Logan, Russell and Butler counties. Ultimately, the program represents the most significant grassland restoration project ever completed in Kentucky.

The expansive habitat restorations

posed a unique and rare opportunity to assess the landscape-level influence of habitat restoration for local populations of northern bobwhite and a suite of grassland songbirds. In concert with the Farm Service Agency and Mississippi State University, Department personnel embarked on an elaborate experimental designed aimed at understanding how density of restored habitat effects bird density at the local scale (i.e, farm). Randomly selected



GARY SPRANDEL MAP

# CREP MONITORING

monitoring points contain between 3 and 9% native grassland restoration within 500 m of the listening point. A control will also be monitored which has less than 1.5% grassland restoration within 500 m and 3000 m of the point. So, essentially no restoration influences.

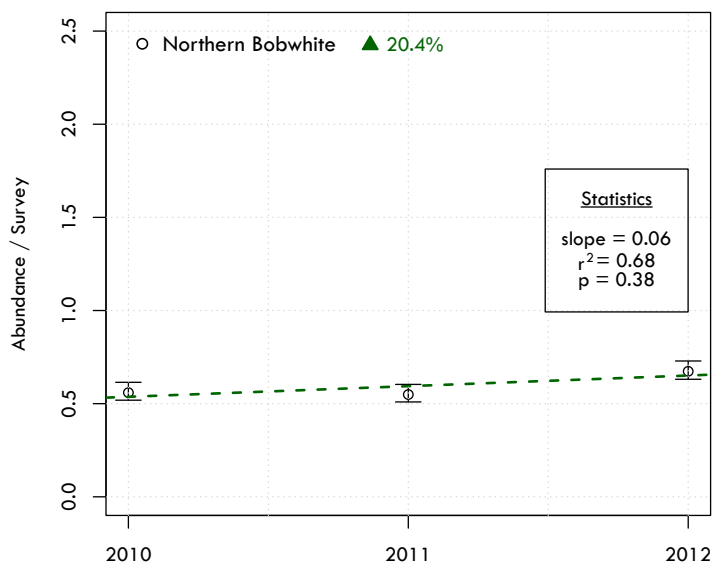
The restoration effect will be evaluated by four categories at the landscape scale. The landscape is defined as the land within 3000 m of the sampling point. Therefore, the local or farm level represents a 194 acre area and the landscape a

6,991 acre area. A low landscape influence has less 1.5% grassland restorations at the landscape scale. Two moderate categories included 5-10% and 11-15% restoration. Finally, a high category is defined as greater than 16% restoration.

Over the last 5 years, Department staff have monitored 254 points each year to determine densities of northern bobwhite and grasslands songbirds. We hope to understand and demonstrate how higher amounts of grassland restoration in a landscape result in higher bird densities

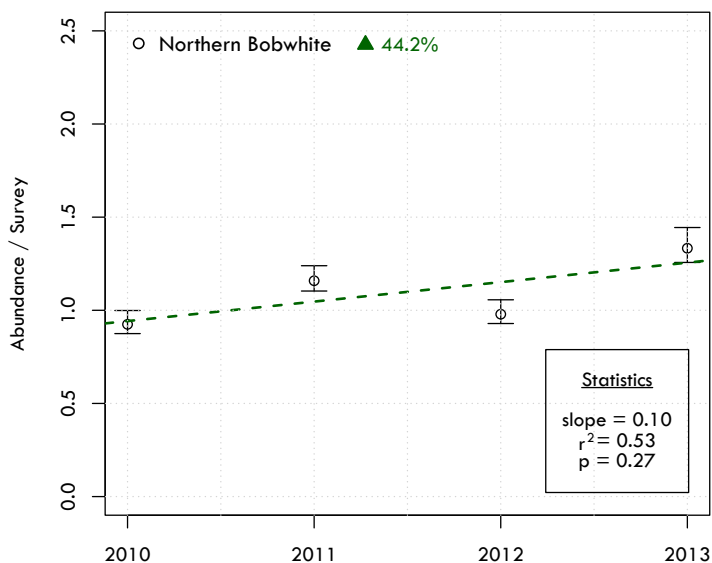
at the farm level. Ideally, we will gain a better understanding of habitat restoration thresholds that generate significant bird responses. For example, a restoration that enhances greater than 10% of the landscape will double local bird densities compared to those restorations that enhance only 5% of the landscape. Understanding how much habitat restoration at the landscape scale is needed to generate bird responses will provide the foundation for restoring bobwhite and grassland birds across Kentucky and beyond.

## <1% CREP: BOBWHITE RESPONSE



Beginning in 2010, a stringent bobwhite and songbird monitoring protocol was created to evaluate population responses across the 1,863,009 acre Conservation Reserve Enhancement Program (CREP) area. The main goal of the protocol was to determine how much habitat was needed to have a positive impact on bobwhite and songbirds. The <1% graph represents landscapes with little habitat in place. Note that an increase in bobwhite was recorded. This was likely a direct result of large blocks of habitat in the vicinity of these fields. Even though the habitat was not high quality in the monitoring areas, young bobwhites likely dispersed from better habitat in search of new homes.

## >10% CREP: BOBWHITE RESPONSE



The graph titled >10% CREP represents landscapes with high densities of CREP fields. We noted a solid increase in bobwhite abundance across these areas. Habitat management will be required to increase this trend. Without proper habitat management in the form of controlled burning, disking, and herbicide, we are in jeopardy of losing our population gains.





BEN ROBINSON PHOTO

CREP team, left to right: Scott Harp, Wayne Tamminga, Kevin Raymond, Jason Nally, John Goodin, Tyler Reagan and Wes Little. Not pictured: Jonah Price.



*“In 2004 we were managing a 600 acre cattle farm and began to enroll portions of the farm into the Conservation Reserve Enhancement Program (CREP). At that time we had about 2 coveys of quail on opposite ends of the farm. Now, about 550 acres of the farm has been enrolled in CREP including 46 acres of hardwood tree plantings and 504 acres of native warm season grass and forb plantings. The change in habitat has produced a very noticeable difference in wildlife. We now have 10 – 12 coveys of quail that we can hunt. Our deer hunting has also improved tremendously and we are able to successfully trap fox, coyote, and bobcat. We also enjoy watching the abundance of song-birds that use our CREP fields.”*

— Terry Partin  
Adair County Landowner

*“As a result of the CREP program I have seen a large increase in the numbers of quail (plus other small birds), rabbits, turkeys and deer. At the start of the program my wife’s and my goal was to increase our quail population and we have seen at least a 90% increase of quail on our farm. To reach the point where we are at now has required much time, work and dedication. But this is a project that we have longed to do and it has been a very rewarding experience. We frequently see quail in our yard as well as rabbits. Before the program quail were becoming a rare sight on our farm.”*

— T.G. Johnson  
Allen County Landowner





Help fund bobwhite restoration by purchasing the quail license plate. You can follow our progress at [facebook.com/KentuckyQuail](https://www.facebook.com/KentuckyQuail)



# QUAIL PLAN ASSESSMENT TIMELINE

## 1 YEAR


 Lack of monitoring: Employ monitoring plan in 1 year for 2 focal areas. Employ monitoring plan by year 6 for remaining 2 areas.


 Employ monitoring plan on all focal WMA's in 1 year.

Compile project list for potential philanthropists: All strategies should be employed within 1 year.

## 3 YEARS

Provide additional training for staff: Employ all strategies within 3 years.

 Purchase necessary equipment: Employ all strategies within 3 years.

 Control hunting pressure on WMA's: Employ a unique hunting framework on each focal WMA within 3 years.

Enhance habitat on surrounding private property: Employ all strategies within 3 years.


## 2 YEARS


Renovate public wildlife management areas (WMA): Create WMA management plans in 2 years. Implement plans over the following 8 years.

## 5 YEARS


Involve non-hunting groups and the public: Employ all strategies within 5 years.

Adequately support focus areas: Employ all strategies in 2 focus areas in 5 years. Initiate all focus areas in 8 years.

 Generate landowner interest: Employ 5 strategies on 2 focus areas in 5 years. Employ a minimum of 5 strategies in 10 years on remaining focus areas.

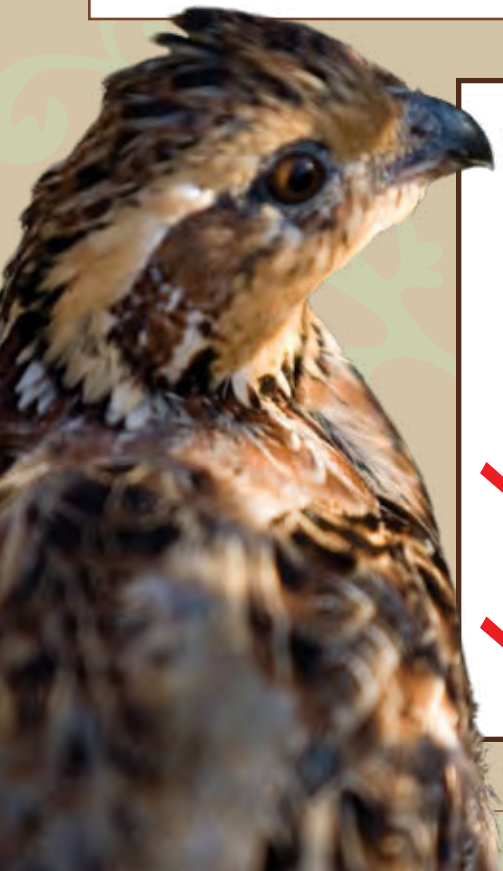
 Increase focal WMA staff: Employ a minimum of 2 strategies on 3 focal WMAs in 5 years. Employ 2 strategies on remaining WMAs in 10 years.

Provide positive hunting experiences: Employ all strategies within 5 years.

 Control hunting pressure on WMA's: Summarize social and biological impacts to controlled hunting in 5 years.

Renew aesthetic interest in quail: Employ all strategies within 5 years.

Garner funding for quail restoration: All strategies should be employed in 5 years.





## 6 YEARS

Lack of monitoring: Employ monitoring plan by year 6 for remaining area.

## 8 YEARS

Adequately support focus areas: Initiate remaining focus areas in 8 years.

## 10 YEARS

Enhance Row Crop Operations: All strategies should be employed in 10 years.

Augment mine reclamation projects: Enhance 10,000 acres of mine reclamation projects for early successional wildlife. Renovate 10,000 acres of bond released lands for early successional wildlife.

Revolutionize Grazing Operations: Employ 8 strategies in 10 years.

Spawn participation in cost-share programs, particularly those designed for quail: All strategies should be employed in 10 years.

Amplify prescribed burning across the landscape: All strategies should be employed in 10 years.

Establish Kentucky-based quail research: Employ 3 strategies in 10 years.

Generate public interest and awareness about bobwhite: Employ a minimum of 20 strategies over 10 years.

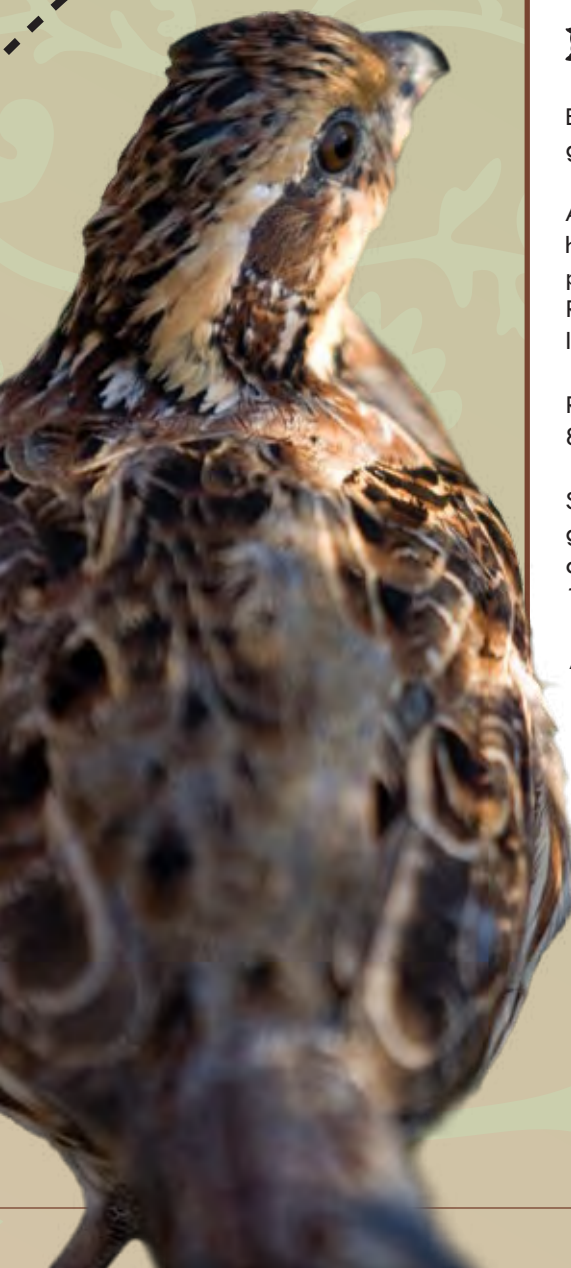
Supply landowners the equipment to establish and manage quail habitat: Employ 4 strategies within 10 years.

Build relationships with partners: Employ all strategies over a 10 year period; generating 25 partner agencies and organizations.

Design or plan developments in an environmentally-sensitive manner: Employ 3 strategies over 10 years.

Generate landowner interest: Employ a minimum of 5 strategies in 10 years on remaining focus areas.

Increase focal WMA staff: Employ 2 strategies on remaining WMA's in 10 years.



# ROAD TO RECOVERY:

## Where Do We Go From Here?



BEN ROBINSON PHOTO

*“We are pleased with Fish and Wildlife’s efforts to jump start the bobwhite population in Livingston County - I heard more calling when the coveys broke roost last year. Something else I have noticed: I have seen some songbirds and other species that I haven’t seen in some time. Thank you for allowing us to participate in the program.”*

— Dr. Ivus Crouch  
Livingston County  
Landowner

**T**HE LAST FIVE years have been filled with many highs and lows. We have seen dollars dedicated to quail restoration rise, and we’ve seen them fall. We have seen targeted habitat teams experience success, and we’ve seen them struggle. We have experienced excellent weather for quail production, and we’ve seen hot, dry summers and extreme cold winters that limited bird numbers. Through it all we have persevered, refusing to give up. That level of dedication by so many has resulted in several successes.

Achieving success often creates a level of comfort and satisfaction that makes further effort seem unnecessary. We don’t intend to rest on our laurels. Most of our focus areas have not yet reached their full potential. While we’ve documented increasing quail populations across all areas, intensive habitat maintenance over the next five years should only accelerate population growth. New opportunities will likely present themselves and we intend to remain flexible, yet aggressive moving forward.

New opportunities; creating a new focus area, is more than a title. It requires dedicated funding to provide the equipment and manpower needed to do the job. Fund raising for quail restoration has been weak thus far. The KDFWR stepped up out of the gate, as did a few key partners, but significant support from additional partner organizations will be critical to our success as we move forward.

Increased funding support could allow us to invest resources into new areas like West Kentucky Wildlife Management Area (WMA). Listed as one of our original Quail Focus Areas, West Kentucky WMA is poised to be successful moving forward. A lack of equipment and quail monitoring has limited their capacity to restore quail and document success. An increase in funding could be a game changer.

The Sinking Creek Quail Focus Area in Breckinridge County could be the next big private lands success. A dedicated focus area biologist is needed to lead the charge. A targeted habitat team used to assist landowners with habitat improvements would be a key component in the success of this area. Dedicated funding could make these goals reality.



Reclaimed mine lands in East Kentucky provide thousands of acres of possibility. We have done a poor job tapping this opportunity. Anecdotal reports tell us that quail are present, but the habitat needs attention to unleash the full potential. A dedicated biologist and habitat team coupled with research could result in an explosion of quail across this mountainous region. The combination of elk and quail sharing the same habitat could be a match made in heaven!

Despite our successes, only Peabody WMA and Clay WMA have received adequate funding support over the last five years. Areas like the Bluegrass Army Depot and Hart County have received little financial help. The Hart County Focus Area continues to operate without a dedicated biologist. The early successes in this area were the result of some quality Farm Bill biologists assisting landowners with contract writing, resulting in habitat on-the-ground. Without a dedicated biologist and habitat team to conduct much needed habi-





BEN ROBINSON PHOTO

tat maintenance, we could see a decline in quail numbers moving forward.

Success breeds success. We must do a better job of sharing our story to encourage others to join the charge. We continue to work to engage the public, but an investment in human dimensions research would ensure that we are targeting the correct audiences, selling the correct message, and offering the right support. These studies also help gauge interest in wild bobwhite hunting, an essential part of the equation.

The lack of partnership with non-hunting groups is another area where we have fallen short. If we are to build upon our successes, we must engage this audience. The support that they can provide for restoring grassland habitats is paramount to our efforts. Human dimensions work would also assist in identifying ways to increase their involvement. This effort is so much larger than bobwhite. It's a land management revolution that will benefit a host of declining grassland songbirds and other associated wildlife.

We must think of ways to expand upon our existing habitat improvements, particularly on private lands surrounding existing quail focus areas. The privately owned acres surrounding Clay WMA and Shaker Village could be a great proving ground for this concept. With thoughtful planning and a proactive approach, thousands of additional acres could hold healthy numbers of quail in the not so distant future. But before we expand outside of these boundaries we must be certain that we are managing our public lands to their full potential. Goals need to be in place for habitat improvements. Bobwhite and other songbird population responses must be measured and habitat improvements planned in advance. Through solid WMA management plans, goals can be set and attained.

The future is bright for Kentucky's bobwhite. But we must not grow idle. The fight to bring back bobwhite has just begun. With thoughtful planning, strong partnerships, increased financial support, and hard work we can, and we will succeed!

*"I have nothing but the highest praise for Kentucky Fish and Wildlife's efforts and how management associated with the Quail Focus Area is being conducted. Any landowner, hunter or wildlife enthusiast would be significantly rewarded with abundant game and wildlife diversity ... (if enrolled) in the Quail Focus Area. Thanks and keep up the great work."*

— Michael W. Johnson

# ACKNOWLEDGEMENTS



BEN ROBINSON PHOTO

*“My experience with Kentucky Fish and Wildlife’s Habitat Improvement Program has been very rewarding. I now have quail whistling where I had none when I purchased the property in 2008. The turkey population loves the diverse habitat, and the rabbits are thriving.”*

— Brad Meyer  
Kentucky Landowner

**T**HE SUCCESSES WE have experienced over the past five years would not have been possible without the assistance of countless individuals. Quail Focus Area Team Leaders Tom Edwards, Nathan Gregory, Philip Sharp and Eric Williams took a tremendous leap of faith by joining in on a task that many deemed impossible. Their tireless work proved that quail restoration can be accomplished. Their efforts garnered national attention when they were awarded the National Bobwhite Conservation Initiative’s Fire Bird Award in 2014.

These quail managers did not tackle the job alone. Numerous biologists, game management foremen, technicians, and partners worked hand in hand to ensure that success was achieved. Whether conducting a quail survey, writing a contract, organizing a bobwhite rally, or operating a piece of equipment, no task was taken lightly. Many of those individuals are pictured throughout the Quail Focus Area section of this publication. Without them, we would have nothing more than a paper document.

Quail restoration requires elevated financial support and we are grateful to those who stepped up. The KDFWR Commission boosted budgets aimed at quail restoration soon after the Quail Plan was released. Dr. Karen Waldrop, former KDFWR Wildlife Division Director, worked to make quail restoration a priority of the division, and for that we are appreciative. Numerous partners stepped up in a big way including The Salt River Chapter of Quail Unlimited and The Commonwealth Chapter of Quail Forever. The Quail License Plate fund has provided much needed assistance for many habitat projects. The Natural Resource Conservation Service (NRCS) assisted by creating ranking criteria

aimed at prioritizing dollars in quail focus areas. Dave Howell, formerly with Quail Unlimited proved to be an invaluable asset, both in securing funding as well as providing logistical support.

Danna Baxley and John Yeiser of the KDFWR Research Program along with Keith Wethington, Gary Sprandel and Tammi Johnson of the KFWIS shop have played a critical role in the success of this project. Without their continued assistance on research design, analysis, mapping and data collection, this publication would not have been possible. The KDFWR Wildlife Diversity Program was pivotal in assisting with key trainings as well as offering advice on monitoring design and implementation. Also, a special thanks to the research team from the University of Tennessee whose data has helped validate that quail restoration can be accomplished.

The KDFWR Information and Education staff once again worked their magic to make this document so visually appealing. A special thanks to Adrienne Yancy for her graphic design talents.

Finally we would like to thank the landowners and sportsmen and women of the Commonwealth who continue to believe that habitat really can restore quail. We look forward to building upon our successes as we move ahead. Go Big or Go Home!



BEN ROBINSON PHOTO





**W**HERE HAVE ALL the quail gone? They fell in the wake of modern agriculture, development, and society's desire for the manicured landscape. Row crop practices are much "cleaner" and larger-scaled. Small fields, weeds, bugs, and brambles are few and far between, and shrublands have matured to forestlands. Kentucky's native grasslands have been transformed to a sea of fescue while the mower decimates thousands of acres of potential habitat annually. The plight of quail is not the fault of the farmer, but that of human advancement. Farming has adapted to meet the demands of society. Society can adapt farming and land management through an investment in conservation creating a better future for themselves and bobwhites.

Habitat <sup>is</sup>  
**ROUGH**  
around the  
**Edges**

**Kentucky**  
UNBRIDLED SPIRIT