

# **Focus on Pheasants**

Proposal of Activities  
May 17, 2002

## **Executive Summary**

In response to continued declines in statewide pheasant numbers, the Nebraska Game and Parks Commission's Board of Commissioners directed staff to assess and develop projects and activities to address this problem. The activities and projects identified were designed to serve the specific goal of delivering tangible benefits to the greatest possible number of pheasant hunters over the next ten years, while maximizing educational opportunities for landowners and other stakeholders regarding the habitat needs of pheasants. Although these recommendations are designed to meet the above goal, it is recognized that NGPC actions alone will not be sufficient to reverse regional or statewide pheasant declines.

Projects emphasizing the creation of pheasant nesting and brood-rearing habitat are recommended. Weedy, diverse grasslands are best suited to provide these habitat types. Cooperation among diverse groups (NGPC, USDA Farm Services Agency and Natural Resources Conservation Service, Pheasants Forever, county weed boards and supervisors, and landowners) will be required to create these habitats. Flexibility in project design will be needed to reach a consensus among these stakeholders.

A "focus area" approach is recommended, whereby habitat management activities are concentrated in specific areas. Three types of focus areas were identified: 1) high-use private land focus areas, 2) public land focus areas, and 3) community-directed focus areas. The general goal is to provide an average of at least 65 acres of high-quality nesting and brood-rearing habitat per square mile within the 16- to 36-square-mile focus areas over a 2-3 year period. High priority locations for high-use private land focus areas include areas within Dixon, Johnson, Stanton, Perkins, Sheridan, and Burt counties (in priority order). High priority locations for public land focus areas include Harlan County Reservoir WMA, Sherman Reservoir WMA, and Branched Oak Lake WMA. An area near Broken Bow associated with the One Box Pheasant Hunt may serve as the initial community-directed focus area.

Maximizing the benefits of USDA programs to pheasants and other wildlife clearly remains our highest priority, because no other effort can affect a similar number of acres. In partnership with USDA and Pheasants Forever, our goal should be to make every upland acre enrolled in a USDA conservation program address the most important factors limiting upland wildlife populations. Passage of a new federal farm bill is imminent, so staff will assist USDA with a new round of program promotion and delivery as those opportunities arise. Based on previous sign-ups, these efforts will consume a significant amount of staff time.

The primary limitations associated with the above activities are 1) the possibility that encouraging non-noxious weeds will not be acceptable to key stakeholders, and 2) the considerable expense (in terms of both money and staff time) associated with the promotion, administration, and incentive payments needed to accomplish habitat projects. Assuming the first can be overcome through education, incentives, and flexible management in enough locations to accomplish focus area objectives, the extent to which habitat goals are met will likely be determined by the time and money resources available to the project partners.

## Nebraska's Pheasants: Past and Future

The ring-necked pheasant's tenure in Nebraska has recently surpassed the century mark, with the first reports of the species occurring around 1900 (Mathison and Mathison 1960). In its first hundred years of residency, the pheasant has become one of the most recognizable and culturally important wildlife species to the state's citizens. Communities throughout rural Nebraska have enjoyed the economic and social activity associated with pheasant hunting since the 1920s, and perhaps no other event has intermingled rural and urban Nebraskans (as well as those from other states) together as effectively as the opening day of pheasant season.

The cultural traditions surrounding pheasant hunting were forged during the peak of pheasant abundance in the state. Following their introduction into the state in the early 1900s, pheasant numbers apparently reached their zenith in the late 1940s, and have generally declined since. Pheasants harvested and hunter numbers have followed this same trend (Figure 1), and the benefits to rural communities generated by pheasant hunting have also been greatly reduced.

Although weather events and fluctuations in the distribution and abundance of predators have no doubt influenced this downward trend in pheasant numbers, there is little doubt that changes in land use practices have had more impact on pheasant populations than any other set of factors. During the period of peak pheasant abundance in the 1940s and 1950s, diverse agricultural operations were the norm, with each operation often consisting of small fields of grain and hay crops interspersed with pasture and idle ground (Taylor et al. 1978). This production system generated, by happy accident, nearly perfect conditions for sustaining high pheasant densities, providing good nesting, brood-rearing, escape, and winter feeding habitats within close proximity.

However, as agricultural technology advanced and markets became more globalized over time, land uses within the pheasant range became more efficient and less diverse. Field sizes grew, idle land became scarce, and weed control became more effective. Wheat, which once provided important pheasant nesting habitat throughout Nebraska's farmlands, has become much less common in the eastern half of the state. As a result, pheasants are no longer a reliable by-product of cropland agriculture, and their numbers have predictably declined (Taylor et al. 1978). We now estimate around 1.4 million acres of nesting habitat would need to be created in order to restore populations throughout Nebraska's primary pheasant range. Clearly, the happy accidents that once supported high pheasant densities have all but disappeared in today's agricultural landscapes.

If pheasants are to become abundant again, active management will be necessary. In most cases, direct economic gain derived from acres devoted to providing pheasant habitat will be reduced, so the ability to offer attractive incentives (financial or otherwise) to landowners in exchange for creating and managing habitat is critical. The most abundant and well-known sources of incentives are the U.S Department of Agriculture's conservation programs, which provide wildlife benefits on hundreds of thousands of privately owned acres in Nebraska each year. It has long been recognized that these programs (most notably, the current Conservation Reserve Program) are the only government-derived incentives funded at a sufficient level to improve habitat (and thus pheasant populations) at regional and statewide scales. The NGPC's traditional role in these programs has been to provide technical assistance to congressional and USDA staff during program development and implementation, and to help promote desirable program options to landowners.

Pheasant habitat is also a management goal on many of the NGPC's own public and private lands

activities. Pheasants management remains a high priority on a number of Wildlife Management Areas across the state, and several popular options under our “Wild Nebraska” private lands programs are geared specifically toward the creation of pheasant habitat. However, while clearly vital to the agency’s mission, these management activities have historically only affected a small percentage of the total landscape. Therefore, they have generally provided benefits at only a local level.

Despite these collective state and federal efforts (many of which are also shared and supported by private conservation organizations, most prominently Pheasants Forever, Inc.), statewide habitat conditions continue to slowly deteriorate, and pheasant numbers continue to erode. Given present agricultural landscapes, it is unclear if and when numbers will stabilize without some fundamental change in commodity production systems. With little margin for error remaining, those interested in maintaining the pheasant hunting tradition must use their limited resources in the most efficient manner possible and look for new ways to keep existing habitats intact and productive.

## Charting a Course

At the direction of our Board of Commissioners, NGPC staff re-examined our efforts to manage pheasant populations and habitat, and looked for ways in which these projects and programs might be improved. In February 2002, statewide habitat management priorities were assessed and projects designed to meet those priorities were developed.

The activities and projects identified were designed to serve the specific goal of ***delivering tangible benefits to the greatest possible number of pheasant hunters over the next ten years, while maximizing educational opportunities for landowners and other stakeholders regarding the habitat needs of pheasants.*** The guiding principles and activities recommended to meet this objective are outlined in the sections below.

Although these recommendations are designed to meet the above goal, it is clear that NGPC actions alone will not be sufficient to reverse regional or statewide pheasant declines. Increases in pheasant numbers will continue to hinge on large-scale habitat improvements, which will ultimately depend on the individual management decisions made by the thousands of landowners within Nebraska’s pheasant range. To help influence these decisions, the recommended projects will demonstrate to landowners and others the necessary habitat components of pheasant production and the methods used to create them.

## Guiding Principles: Weedy Habitats, Partnerships, and Flexibility

Recent research suggests that the abundance of nesting habitat (Riley 1995) and apparent declines in brood-rearing habitat and chick production (Warner et al. 1984, Riley and Riley 1999, Rodgers 1999) are the driving forces behind pheasant trends in modern Midwestern landscapes. Therefore, creation and improvement of nesting and brood-rearing habitats should be emphasized when planning projects. **Weedy, diverse grasslands are best suited to provide these habitats**, and are most easily created by either fallowing crop fields or disturbing (usually by disking) existing mature grass stands. In either of these contexts, planting legumes such as alfalfa or sweet clover can provide extra benefits by ensuring an abundant food source for insects (the critical food items for chicks) in the subsequent plant community (Rodgers 1999).

**Partnerships among stakeholders will be critical** in increasing the abundance of these habitats. Weeds often carry a social stigma, so it will be important to communicate the benefits of these plant communities to various publics. In order for local projects to advance, management activities will often need the participation or approval of the NGPC, the USDA Farm Services Agency and Natural Resources Conservation Service, Pheasants Forever, county weed boards and supervisors, and last but certainly not least, the landowners themselves. Project success will hinge on our ability to reach a workable consensus among these diverse groups.

In order for a consensus to be reached among partners, **flexibility in project design and delivery will be important**. No set of incentives or management techniques will be universally successful, so partners should be prepared (and encouraged) to be creative in achieving project goals.

## Crafting Habitat: A Focused Approach

The primary shortcomings of the NGPC's current public and private land management activities are 1) there are too few acres affected by them, and 2) those few acres are widely distributed. Therefore, their positive effects are often dissipated and overwhelmed by the habitat deficiencies of the surrounding landscape. As a step toward overcoming these problems, a "focus area" approach is recommended, whereby habitat management activities are concentrated in specific areas. This approach was recommended to complement, rather than replace, our current system of on-demand provision of technical assistance and incentives available to the public. The following three types of focus areas were identified:

**High-Use Private Lands Focus Areas** – These will consist of 16- to 36-square-mile areas in which habitat management activities will be concentrated. These areas will be located in counties where current hunting pressure is high; specific locations will be chosen within counties that offer 1) a relative abundance of lands open to public hunting, 2) good potential for the habitat already present to benefit from improvement, and 3) landowners and other partners willing to contribute to habitat projects.

**Based on these criteria, areas within Dixon, Johnson, Stanton, Perkins, Sheridan, and Burt counties (in priority order) were identified as the best candidates for focus areas** (Figure 2). Preliminary contacts with landowners and potential partners have been made in the first three of these counties; further work will be accomplished pending administrative approval. Work could likely be conducted on 2-3 focus areas within the state simultaneously given the predicted availability of staff time and money.

After preliminary focus areas have been defined within these counties, 100% of the landowners owning improvable habitat within those areas will be contacted. Improvements will likely be focused on disking and interseeding legumes into mature CRP fields, but staff will have the flexibility to authorize other improvements as needed. **The goal is to provide an average of at least 65 acres of high-**

**quality nesting and brood-rearing habitat per square mile within the focus area over a 2-3 year period.** After preliminary contacts, if it appears that too few interested landowners will be found to meet this goal, area boundaries will be redefined and a new set of landowners will be contacted.

To evaluate pheasant response to the habitat improvements, annual counts of crowing male pheasants will be made each spring along roadside routes within and outside of the focus areas. Comparisons between these respective trends will be used to evaluate the efficacy of the habitat work.

Project information will be provided to internal and external media outlets on a regular basis to help keep the public apprized of our progress. Focus area projects will also provide ideal opportunities to conduct landowner workshops and other field events demonstrating principles of pheasant habitat management.

**Public Land Focus Areas** – These will be centered around several Wildlife Management Areas identified as having good potential for intensive pheasant management based on their size, their high use by pheasant hunters, and their history of producing good pheasant numbers in the past.

**Harlan County Reservoir WMA, Sherman Reservoir WMA, and Branched Oak Lake WMA are the areas chosen to date as high priority candidates for focus area designation** (Figure 2).

Other areas are being evaluated for their potential utility as focus areas.

More intensive pheasant habitat work (e.g., disking and legume interseeding, tree removal to create larger blocks of nesting habitat, etc.) will be done on these areas, and staff will attempt to initiate projects on nearby private lands to augment this work. Evaluation and public outreach efforts will be similar to those described for the high-use private lands focus areas.

**Community-Directed Focus Areas** – These would be similar to high-use private land focus areas, but would rely on community organizations and/or groups of landowners to define the focus areas, make initial arrangements for habitat projects, and marshal some of the resources necessary to complete the work. The NGPC and our partners would provide technical assistance with project planning as well as matching funds or grants to help improve habitat. Criteria for receiving assistance will need to be developed in cooperation with our partners such that our resources are made available as fairly and equitably as possible. **At present, our goal is to help establish one of these focus areas within each of our six administrative districts within the next five years.**

It is hoped that the creation of the high-use private land focus areas will spark interest in this concept among community groups and landowners elsewhere. The community-directed focus area approach provides an outlet for this interest. However, because it relies on other groups taking the initiative, it is unknown exactly what incentives or assistance the NGPC and our partners will need to offer to stimulate participation in this option. **Preliminary conversations with the organizers of the One Box Pheasant Hunt in Broken Bow have been made, and there seems to be potential for cooperative work in that region** (Figure 2). If developed, this partnership might serve as a good model in the development of other community-directed focus areas.

## **Federal Farm Programs: Making Every Acre Count**

Maximizing the benefits of USDA programs to pheasants and other wildlife clearly remains our highest priority, because no other effort can affect a similar number of acres. In partnership with USDA and Pheasants Forever, **our goal should be to make every upland acre enrolled in a USDA conservation program**

**address the most important factors limiting upland wildlife populations.** These partners recently met to discuss ways of increasing and promoting more disturbance of mature CRP fields to benefit pheasants, and the results were promising. These important policy changes are pending prior to review by USDA oversight committees.

In accord with the focus area approach, the USDA is expected to announce that a large portion of eastern Nebraska is eligible for benefits under the Conservation Reserve Enhancement Program (CREP). The CREP will provide additional incentives for landowners to participate in the CRP within the eligible area. Also, a multi-state “Super-CREP” proposal is currently in development by NGPC staff and other partners. As currently envisioned, this project would direct more CRP-related incentives toward southwestern Nebraska and adjoining regions in other states. Staff will make every reasonable effort to use these new opportunities to complement our focus area activities.

Passage of a new federal farm bill is imminent, so staff will also assist USDA with a new round of program promotion and delivery as those opportunities arise. Based on previous sign-ups, these activities will consume a significant amount of staff time. Also, efforts to educate the public about the importance of farm bill legislation and program delivery to Nebraska’s wildlife habitat base will be emphasized.

## Other Ongoing Activities

Besides our work with USDA programs, several other ongoing programs and activities were identified as especially critical to our pheasant management mission. First, the **CRP-Management Access Program (CRP-MAP)**, which last year opened over 170,000 acres of private land to public hunting and provided habitat improvements on enrolled tracts, needs to be supported at current or increased funding levels in the future. Next, **the Center for Wildlife Studies at the Sacramento-Wilcox WMA** (now in the planning stages) will likely support long-term research on the effects of various grassland management techniques (Figure 2). The resulting information will be very valuable in maximizing future pheasant management benefits on both public and private lands. Finally, the new **wheat stubble management pilot project** will help identify the incentives necessary to encourage more pheasant-friendly wheat management practices in the southern Panhandle (Figure 2). Widespread adoption of these practices could yield tremendous benefits for pheasants in the wheat-growing regions of Nebraska.

## Potential Limitations

The primary limitations associated with the above activities are 1) the possibility that encouraging non-noxious weeds will not be acceptable to key stakeholders, and 2) the considerable expense (in terms of both money and staff time) associated with the promotion, administration, and incentive payments needed to accomplish habitat projects. Assuming the first can be overcome through education, incentives, and flexible management in enough locations to accomplish focus area objectives, the extent to which habitat goals are met will likely be determined by the time and money resources available to the project partners.

Based on past experience administering CRP-MAP contracts, it may cost \$20-\$50 per acre to disk and interseed legumes into existing CRP stands, and take about 16 hours of staff time per contract to contact landowners, administer agreements, and provide oversight on habitat work. Assuming we meet our habitat goals

and that each contract with a landowner will cover about 60-80 acres of work, each 36-square-mile private land focus area will require an estimated \$47,000 to \$94,000 for the 2,340 acres of habitat improvements and about 60-80 man-days of staff time. These projections will need to be taken into account when allocating future project funds, assigning staff priorities, and deciding how many focus areas can be worked on simultaneously.

## Literature Cited

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