

# Greater prairie-chicken (*Tympanuchus cupido*)

February 2006

Fish and Wildlife Habitat Management Leaflet

Number 27

## General information

The greater prairie-chicken is an upland game bird, comprised of three distinct subspecies that inhabit the tallgrass and mixed-grass prairies of the central and southern United States. This species can be identified by its chicken-like body shape; expandable yellow-orange throat skin, or tympani, in males; and brown, barred plumage. Except for its slightly larger size and darker coloring, its appearance resembles that of the lesser prairie-chicken, with which it locally interbreeds. The greater prairie-chicken is also closely related to the sharp-tailed grouse, and these two species are known to interbreed, as well.

During the 1800s, greater prairie-chicken populations shifted north and westward across North America, thriving on the limited agriculture brought by expanding European settlement. The combination of scattered croplands amid expansive grasslands was prime greater prairie-chicken habitat, offering food and cover throughout the year and limiting the need for extended seasonal migrations. Populations began to wane, however, as grassland habitats became more isolated and were replaced by intensive agricultural development. Though the combined subspecies once occupied a vast range across the central United States, from Canada through Texas and east to the Atlantic, the greater prairie-chicken now exists in restricted areas across a fragmented landscape.

Due to a combination of habitat loss, hunting, predation, harsh climate, and a variety of other factors, only two of the three greater prairie-chicken subspecies survive. The extinct heath hen (*Tympanuchus cupido cupido*), that formerly inhabited the eastern United States, was last sighted in 1932 on Nantucket Island. Attwater's prairie-chicken (*T. c. attwateri*), now federally endangered, was represented in the wild by fewer than 50 birds until recent releases of captive-raised individuals. The northern race (*T. c. pinnatus*) is found in the country's interior and occupies only a fraction of its former range.



*The State Journal-Register*

**Greater prairie-chickens inhabit North American prairies, as their name implies. Both tallgrass and mixed-grass prairies support prairie-chickens, but much of these habitats have been degraded or lost during the last two centuries.**

This leaflet is intended to provide an introduction to the habitat requirements of the greater prairie-chicken and assist landowners and land managers in developing comprehensive greater prairie-chicken management plans. The success of any species management plan depends on targeting the needs of the species while considering the needs of the people managing the land. This leaflet provides management recommendations that can be carried out to maintain existing greater prairie-chicken range and to create additional habitat. Land managers are encouraged to collaborate with wildlife professionals to identify and attain management objectives.

## Range

The greater prairie-chicken is considered extirpated in Canada, and in several states and counties within the United States where it once flourished. Iowa's current population stems from reintroduction efforts, as its original population disappeared in the 1950s, but prairie-chicken numbers remain small and precarious. Illinois and Missouri have listed the bird

as endangered, and it is considered threatened in Wisconsin and of special concern in Minnesota. Populations are also found in Oklahoma, Kansas, and Colorado and appear to be most secure in Nebraska and South Dakota.

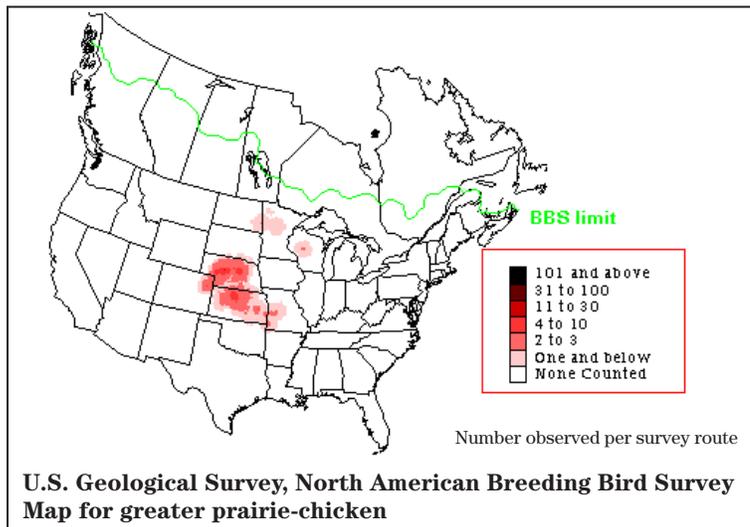
Attwater's prairie-chicken formerly inhabited the coastal prairies of Texas and Louisiana. After disappearing from one county after another, it has until recently been found only in Texas at the Galveston Bay Prairie Preserve in Galveston County and at the Attwater Prairie Chicken National Wildlife Refuge in Austin and Colorado counties. Captive breeding programs are currently underway, however, and reintroduction efforts may help to restore the bird to its former range.

### Habitat requirements

Greater prairie-chickens are primarily dependent upon grasslands, but occupy several different habitats within such ecosystems throughout the year in order to meet their seasonal needs. In addition to the critical food and cover that prairies provide, interspersed croplands, wetlands, oak stands, and shortgrasses may also be necessary to ensure that adequate resources are available. Habitat requirements and behaviors may differ slightly from one population to the next because the greater prairie-chicken exists in relatively isolated populations across a range of several states.

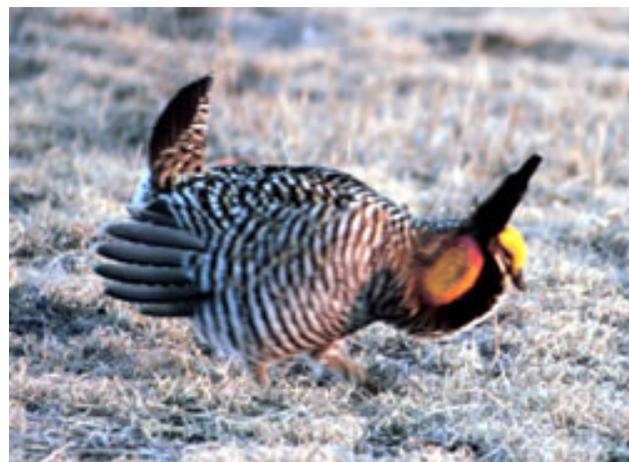
### Food

Greater prairie-chickens are primarily herbivorous, consuming the fruits, seeds, flowers, shoots, and leaves of a variety of plants. Grasses, sedges, rushes, forbs, and some shrubs account for the wild vegetation they consume. During the winter months, however, these food resources become scarce, and greater prairie-chickens rely heavily on waste crops such as corn, soybeans, sunflowers, wheat, and other grains, where available. Acorns, buds, and seeds from grasses and forbs also contribute to the winter food supply. In the summer, insects provide a significant source of nourishment for all greater prairie-chickens, but they are particularly important to juveniles throughout the brood period. High insect numbers have been linked to the presence of native forbs and legumes such as alfalfa and sweetclover, also consumed by both juveniles and adults.



### Breeding cover

Like other prairie grouse species, greater prairie-chickens use breeding areas known as leks or booming grounds, where males gather in the spring to attract and mate with females. Leks are generally situated in highly visible, open areas, which allows greater opportunity for birds to detect predators and for females to observe displaying males. Such conditions can be found in areas of short vegetation, as well as on low traffic areas such as roads, airfield landing strips, and similar disturbed sites. Booming grounds may be located on flat lands, but elevated areas where low-lying vegetation exists tend to be more desirable. The same breeding grounds are often used year after year, and males continue to visit these locations outside the mating season.



Male greater prairie-chickens perform display rituals and compete to breed with females.

### ***Nesting and brood-rearing cover***

Nesting usually takes place between April and June. Average clutch size is 12 eggs, and the incubation period is 23 to 26 days. Renesting may occur if initial attempts are unsuccessful. Nests are lined with vegetation in shallow depressions and are commonly found in undisturbed meadows, pastures, and hayfields. Areas in which principal cover consists mainly of native warm-season grasses such as little bluestem, big bluestem, switchgrass, and Indiangrass are often chosen as nest sites by females. Smooth brome and other non-native cool-season grasses may also attract nesting females; however, monocultures of these species may detract from overall habitat quality due to their homogenous vegetative structure. Vegetation should consist of medium height, but dense grasses to provide shade and protection from predators, yet they should not be so tall that the hen is unable to view potential threats from a standing position nor so dense that young chicks are unable to move through the grasses to escape danger.

Brood-rearing cover must also give shade and protection from predators, but it differs from nesting cover in that vegetation is somewhat sparser at ground level. Females will usually select cover that has been recently disturbed, as these areas facilitate movement by young chicks and possess forbs that attract high numbers of insects upon which broods can feed. Pastures, hayfields, and native grasses that have been grazed, burned, mowed, or disked are often chosen for brood rearing. Disturbed herbaceous wetlands may also be used.

### ***Winter cover***

Greater prairie-chicken activity in the winter centers around feeding, roosting, and lowland loafing. Food availability is a critical factor for greater prairie-chickens in the winter months. Extensive movement and excessive energy expenditure to locate food can increase mortality, so cover will ideally be in close proximity to food sources. Agricultural lands provide a large percentage of food at this time of year and are also used for loafing and some roosting. Low vegetation is commonly used for foraging, as well.

Habitat must provide refuge from extreme weather. Sedges and grasses, particularly those more than 20 inches tall, are often used by greater prairie-chickens for roosting cover and facilitate snow accumulation of sufficient depths to allow for snow burrowing. Woody vegetation including shrubs such as snowberry and herbaceous wetlands are also used for roosting.



*Jeff Vanuga, USDA*

**Diverse grasslands provide important nesting and escape cover for greater prairie-chickens, but monocultures, like that pictured above, do not.**

### ***Interspersion of habitat components***

Ideal habitat for greater prairie-chickens consists of extensive tracts of tallgrass and mixed-grass prairies, interspersed with cropland in an approximate 3:1 ratio. These two components complement one another by supplying food and cover year-round. As well, management areas should contain less than 10 percent wooded and urban areas (combined). While greater prairie-chickens do make seasonal shifts throughout the year to find food, they generally do not migrate long distances. It is, therefore, important that various habitat elements be in close range. Nesting, brood-rearing, and roosting activities typically occur within 5 miles of a booming ground. Females prefer nest sites within 2 miles of leks, and the high-energy, high-protein foods found in good brood-rearing cover must be accessible from nesting locations by young birds. It is advantageous for habitats to be either large enough to support multiple populations or near other population-supporting habitats to limit genetic isolation and facilitate recolonization in the event of local extirpations.

### ***Minimum habitat area***

The greater prairie-chicken is an area-sensitive species. The minimum area required to support a healthy population is dependent on the composition and quality of the habitat. At its highest quality, greater prairie-chicken habitat should occupy a total area of no less than 2 square miles, and this may be a conservative estimate according to research in some areas. Continuous tracts of grassland are best; although, this size requirement can be met by maintaining nearby blocks of at least 160 acres, each a minimum of one-half mile wide. Table 1 provides a summary of habitat requirements for the greater prairie-chicken.

## Limiting factors

Major limiting factors for greater prairie-chicken populations include availability and quality of the habitat requirements described above. However, secondary population constraints may further limit greater prairie-chickens in some areas. Of particular concern are invasive vegetation species, predation, interspecific competition, and disease. Table 2 presents an example inventory chart for recording limiting factors.

### *Invasive vegetation*

Invasive plant species can indirectly harm greater prairie-chickens and other wildlife by altering habitat structure and displacing beneficial vegetation that could be used for food and cover. Leafy spurge, for example, is an introduced weed that has infested parts of the northern greater prairie-chicken's range, and Chinese tallow and Macartney rose have become a nuisance in Attwater's prairie-chicken habitat. Non-native cool-season grasses such as Kentucky bluegrass and smooth brome have been used by greater prairie-chickens for nesting, brood-rearing, and roosting, but these species often become invasive without proper management and detract from overall habitat quality. Similarly, sweetclover is frequently used for food, but its aggressive nature poses a threat to native vegetation. Also, encroachment by trees and woody plants leads to a conversion from grasslands to woodlands, reducing habitat for the greater prairie-chicken.

### *Predation*

Predation is a normal occurrence in nature and, in balanced ecosystems with healthy predator-to-prey ratios, is not a threat to prey populations. The greater prairie-chicken may be vulnerable to this threat, however, where proper cover is lacking or where preda-



*Roger Hill, USDA*

**Great horned owls are skilled hunters whose prey sometimes includes the greater prairie-chicken.**

tor populations are unusually high. Among the greater prairie-chicken's main predators are raptors, with foxes, skunks, raccoons, snakes, and domestic dogs and cats causing mortality through nest predation.

### *Competition*

When two or more species overlap in range and utilize the same limited resources to meet their needs, competition is unavoidable. A lack of management of greater prairie-chicken habitat results in increased woody vegetation that is characteristic of sharp-tailed



*Roger Hill, USDA*

**The ring-necked pheasant, native of Asia, was originally brought by European settlers due to its value as a game species.**

grouse habitat, presenting the opportunity for these two species to interact. Both are similar enough that they can interbreed, and they have been observed competing on booming grounds. The introduced ring-necked pheasant has thrived by parasitizing greater prairie-chicken nests, resulting in diminished nest success for the latter species in areas where they live in small patches or where they must be intensively managed. These competitive relationships have the potential to exacerbate the greater prairie-chicken's decline.

### *Disease*

Disease is not currently a widespread problem among greater prairie-chicken populations, but it can become a serious threat, should individuals come into close contact with one another. This can occur where food plots are small and isolated, leaving populations with only a limited area in which to gather. Commercial poultry facilities also increase the potential for disease, which can be transmitted to greater prairie-chickens if contact is made.

*Greater prairie-chicken (Tympanuchus cupido)*

**Table 1** Summary of greater prairie-chicken habitat requirements

Habitat component	Habitat requirements
Food – young	Insects – particularly beetles and grasshoppers Some plant material – especially leguminous forbs (alfalfa, clover, and sweetclover)
Food – adult	Grasses, sedges, rushes, forbs, and some shrubs Cultivated crops – corn, soybeans, sunflowers, sorghum, wheat, oats (also barley, millet, rye, buckwheat) Insects Other noteworthy foods – acorns, rose hips, dandelions, leguminous forbs (alfalfa, clover, and sweetclover)
Breeding cover	Highly visible areas with low-lying vegetation – may be on flat lands, but preferably in elevated areas Short cover areas or human developments such as roads and airfield landing strips
Nesting cover	Medium height, dense grasses such as little bluestem, big bluestem, switchgrass, and Indiangrass
Brood-rearing cover	Recently disturbed areas with grasses and forbs such as medium grazed pastures, hayfields, and burned habitats
Winter cover	Tall sedges and grasses that accumulate snow for burrowing and are located near croplands and other winter food sources
Habitat interspersion	Tall- and mixed-grass prairies interspersed with cropland at a 3:1 ratio Nesting, brood rearing, and winter cover centered within 5 miles around a booming ground
Minimum habitat size	Total habitat of at least 2 square miles Continuous tracts of grassland habitat are best, but size requirement may be met by blocks of at least 160 acres with a minimum width of one-half mile

**Table 2** Inventory of limiting factors

Habitat component	Availability/quality		
	High	Medium	Low Absent
Food			
Breeding cover			
Nesting cover			
Brood-rearing cover			
Winter cover			
Interspersion of habitat components			
Minimum habitat area			

Limiting factor	Quantity/degree of interference		
	High	Medium	Low Absent
Invasive/exotic vegetation			
Predator populations			
Competitor populations			
Disease			

For planning purposes, fill in table 2 to determine the potential of a given area to support greater prairie-chicken populations. Rate the habitat components and population constraints for the designated planning area based on the above descriptions. Habitat components that are absent from the area, or are available in low quantity or quality, are probably limiting greater prairie-chicken populations. High prevalence of secondary population constraints may likewise indicate an unhealthy ecosystem or lead to a habitat imbalance in the future. Once limiting factors have been identified, select the management options from table 3 that are most likely to raise the quality or availability of habitat components determined to be limiting greater prairie-chicken habitat potential. Tables 4 and 5 list NRCS conservation practices and various programs that may provide financial or technical assistance to carry out specific management practices.

### **Grassland management for greater prairie-chickens**

The decrease in grassland habitat due to destruction and/or lack of management and the decline of greater prairie-chicken populations are directly related. In the absence of large, healthy prairies, greater prairie-chickens lack sufficient food and cover, and are at a marked disadvantage when faced with predation and disease. Detailed below are several ways in which land managers can establish additional prairie habitat and improve the quality of existing habitats.

#### ***Prairie restoration***

Degraded lands, or land used for other purposes, can be converted to prairie to increase habitat for greater prairie-chickens and other grassland species. Selected sites should be wide open and higher in elevation than the surrounding land. Native warm-season grasses and forbs are most beneficial for wildlife, and seeding mixtures should be selected based on the soil type and climate of the region. Site preparation is critical. Prior to seeding, the designated area should be cleared of undesirable vegetation to reduce competition when new seeds are planted. This can be performed manually or by applying a nonpersistent herbicide. It may be necessary to repeat this step several times if regrowth occurs, but seeding should be delayed at least 2 weeks following an herbicide treatment. Seeding can be done in the spring or fall with a specialized seed drill. Prairies may take several years before becoming fully established, but they offer a significant contribution to wildlife. For more information on native warm season grasses, refer to Fish and Wildlife Habitat Management Leaflet Number 25, Native Warm-Season Grasses for Wildlife.

#### ***Patch burning***

Because greater prairie-chickens usually occur in areas grazed by cattle or other herbivores, grazing management is an integral part of restoring their habitat. Fire can also be used to alter the structure and composition of the native plant community. However, large-scale uniform burns and grazing systems that use additional fencing are detrimental to the greater prairie-chicken. Patch burning, also known as rotational grazing without fences or fire-grazing interaction, provides an alternative to traditional fire and grazing programs and a practical way to restore greater prairie-chicken habitat. Patch burning increases landscape heterogeneity and provides the diversity of habitat, structure, and plant composition that the greater prairie-chicken requires without affecting livestock performance. Patch burning allows grazing and fire to interact to cause a shifting vegetation pattern across the landscape.

Patch burning is accomplished by applying spatially discrete fires to approximately one third of a management unit and allowing animals free access to both burned and unburned patches. Livestock will focus grazing on recently burned patches until new patches are burned. When grazing shifts to newly burned patches, patches previously burned have abundant forbs and begin to return to grass dominance. When patches return to grass dominance they are burned again, restarting the cycle. Landscapes with these distinct patches resemble the mosaic characteristic of historical grasslands and provide a diverse choice of habitats for wildlife that cannot be created by continuous grazing or rotational grazing within years. The appropriate frequency of fire in a patch burn landscape is dependent on climate. Late summer, fall, and winter burns usually allow for a higher proportion



*Lynn Betts, USDA NRCS*

**Cattle often graze in areas that provide prairie chicken habitat, but with proper grazing management, the two can coexist.**

of forbs and less disturbance to nesting sites than do spring burns.

### **Prescribed burning**

Even without the grazing component, burning is an effective tool in grassland management. When applied properly, fire can control invasive and woody vegetation, maintain various stages of plant growth, and promote biodiversity and prairie health. Managed burns should be conducted rotationally at intervals of 3 to 5 years, allowing approximately 65 to 75 percent of grassland, in blocks at least a half-mile wide, to remain undisturbed annually. Firebreaks should be used to contain fires on prescribed areas. Burns performed in early spring and late summer generally yield the greatest benefit for wildlife, although local conditions should be considered to determine ideal timing. Prescribed burning is a technical process that should be conducted under the direction of wildlife management professionals and in compliance with all state and local regulations.

### **Mowing**

Although not as effective as prescribed burning, mowing and haying can be used to achieve similar results in prairie management. Mowing is useful in controlling weeds and promoting growth of desirable vegetation. As with burns, it is most advantageous to mow on a rotational schedule at 3- to 5-year intervals. To reduce mortality of ground-nesting birds, mowing should be postponed until August, if possible. Delayed mowing may not be a feasible option on all lands, particularly haylands managed for forage harvest. Managers of these lands may instead have some success accommodating ground-nesting birds by avoiding areas in which they are known to nest or by mowing from the center of a field outward, which provides an opportunity for escape. Additionally, mowing should be completed early enough in the season to allow for some regrowth, which will provide residual vegetation for nesting cover the next spring.

### **Disking**

Light disking can be performed to maintain sections of non-native grasslands at an early successional stage and to open them up for broods and foraging. Disking should be carried out in February or March, prior to the nesting season. Strips should be rotationally disked to a depth of 2 to 4 inches at an interval of 3 to 5 years. No more than a third of a field should be disked annually. Disking can also be performed to create firebreaks around prescribed burn areas.

### **Reducing predation and competition**

The best protection that greater prairie-chickens have against predation and competition is the availabili-



*Jeff Vanuga, USDA*

**Fire is an important component of natural grassland ecosystems. Burning increases nutrients available for plant growth, and improves wildlife habitat structure. Today, managers perform controlled burns to simulate natural disturbance.**

ty of high-quality grassland. Maintaining this habitat provides the vegetative cover that hens use to build well-concealed nests, and it eliminates woody vegetation that predators hide in or use as hunting perches. Because sharp-tailed grouse habitat typically consists of grasses and woody brush, maintaining grasslands at an early successional stage will help to keep its habitat separate from that of the greater prairie-chicken.

Ring-necked pheasants frequently lay their eggs in prairie-chicken nests, essentially tricking greater prairie-chicken hens into incubating and raising pheasant chicks rather than their own due to a shorter incubation period. This interaction can severely reduce greater prairie-chicken nesting success in areas where prairie-chicken numbers are dangerously low. Land managers can help to reduce the impact on greater prairie-chickens by reducing or eliminating ring-necked pheasant populations from important greater prairie-chicken habitats. Hunting is one option that can be considered to accomplish this objective. Another option involves removing pheasant eggs from greater prairie-chicken nests, but land managers must be able to locate nests and identify eggs by species.

## **Cropland management for greater prairie-chickens**

The interspersing of croplands with prairies has been attributed to the greater prairie-chicken's widespread dispersal across the United States in the 19th century. Although crops are required in lesser quantities than grasslands, they remain a critical component of great-

er prairie-chicken habitat, especially in the northern range. Land managers can incorporate one or more of the management options described below into their existing practices to provide improved or increased cropland cover for greater prairie-chickens.

### ***Crop residue management***

Conservation tillage provides an alternative to conventional tillage practices, which remove residue from the soil surface. Leaving crop residue on the surface serves a number of purposes such as increasing nutrients in the soil, reducing erosion, and improving wildlife habitat. Reduced-till farming techniques leave 15 to 30 percent of the soil surface covered with residue after planting. Conservation tillage systems, which encompass mulch-, ridge-, and no-till practices, allow 30 percent or more of the soil surface to remain covered. Crop residue management can result in increased insect populations, but greater prairie-chickens will benefit by consuming both crop residue and the invertebrates that are attracted to it. Land managers should carefully select a tillage system and may wish to combine it with integrated pest management.

### ***Pest management***

Chemicals can be an effective way to control weeds, insects, and other pests. However, many chemicals can be toxic to nontarget organisms and can destroy food supplies for some species. When managing for greater prairie-chickens, it is important to consider their food and cover requirements. During the summer months, their diet consists largely of insects, and they rely on grasses and forbs for nesting and brood rearing. The breeding season is a critical period for

greater prairie-chickens, and chemical treatments at this time may destroy their prey base and damage their habitat. Whenever possible, land managers should try to limit pesticide applications through effective integrated pest management. Further information on integrated pest management is found in Fish and Wildlife Habitat Management Leaflet Number 24, Integrated Pest Management and Wildlife.

### ***Food plots***

Food plots can provide supplemental winter food for greater prairie-chickens and may be particularly useful when significant snow accumulation prevents access to other food sources. Plots will ideally offer a mix of grains, but corn and sorghum are good options if only one or two can be planted. Landowners should be careful in planting food plots as they can potentially attract wildlife to areas of low habitat quality and present an opportunity for disease to spread. To reduce these risks, multiple food sources should be made available in high-quality habitat, and land managers should avoid planting food plots in areas frequently occupied by domestic poultry. Table 3 lists greater prairie-chicken management options.

### **Available assistance**

Technical and financial assistance is available to landowners through a variety of government agencies and other organizations. Landowners and managers should enlist the expertise of state and local natural resource professionals to help assess habitat quality and management practices for sustaining greater prairie-chicken populations and enhancing habitat quality. Table 4 lists NRCS conservation practices that may be useful in undertaking management actions. Table 5 lists organizations that can provide information about greater prairie-chicken management, as well as other natural resources projects, and describes their associated conservation incentives programs.



*Gene Alexander, USDA*

**Increased soil organic matter, improved water infiltration, reduced soil erosion, and forage and cover for wildlife are just a few of the benefits afforded by crop residue management.**

*Greater prairie-chicken (Tympauchus cupido)*

**Table 3** Management options for improving greater prairie-chicken habitat

Habitat component	Management options for increasing habitat quality or availability	Conservation practices/ assistance programs
Food	Maintain grass and forb components within tallgrass prairies by implementing rotational disturbance management options, especially prescribed burning	338, 645, 647 CRP, EQIP, PFW, WHIP
	Use crop residue management techniques, such as reduced or conservation tillage, to leave waste crops on the soil surface as winter food sources	329 A,B,C, 344
	Limit herbicide and pesticide use, replacing with non-chemical management techniques when possible, to prevent harmful exposure to wildlife and to ensure availability of insect prey	595
	Plant multiple food plots of mixed grains, especially corn and sorghum, near winter roosting cover to supplement winter food sources	CRP, EQIP, PFW, WHIP
Cover	Establish new prairies by seeding with native grass species such as little bluestem, big bluestem, switchgrass, and Indiangrass, and native forbs	327 CRP, EQIP, PFW, WHIP
	Preserve and maintain areas used as, or appropriate for, breeding grounds by implementing disturbance management techniques as necessary	338, 645, 647 CRP, EQIP, PFW, WHIP
	Maintain grasslands for nesting cover by mowing or, when possible, by rotationally conducting prescribed burns at 3- to 5-year intervals	338, 645, 647 CRP, EQIP, PFW, WHIP
	Delay mowing until August to reduce mortality to ground-nesting birds	
	Open up grassland for brood rearing by using patch burning	645, 647 CRP, EQIP, PFW, WHIP
	Disk strips of non-native grassland on a rotational basis near breeding and nesting cover at 3- to 5-year intervals to open up portions of habitat for foraging and brood rearing.	645, 647 CRP, EQIP, PFW, WHIP
Overall habitat	Avoid creating additional habitat components near areas where domestic poultry are found (to prevent disease transmission)	314, 647
	Minimize predation by maintaining adequate nesting cover and, if necessary, removing woody brush and trees that are used as cover or hunting perches by predators	CRP, EQIP, PFW, WHIP
	Control nest parasitism by removing ring-necked pheasants or by removing their eggs from known greater prairie-chicken nests prior to hatching	
Interspersion of habitat components	Maintain landscape at a 3:1 grassland-to-cropland ratio Maintain and increase quality habitat components through a combination of the above management prescriptions	

*Greater prairie-chicken (Tympanuchus cupido)*

**Table 4** NRCS conservation practices

Code	Conservation practice
314	Brush management
327	Conservation cover
329 A,B,C, 344	Residue management
338	Prescribed burning
595	Pest management
645	Upland wildlife management
647	Early successional habitat development

**Table 5** Programs that provide technical and financial assistance to develop fish and wildlife habitat on private lands

Program	Land eligibility	Type of assistance	Contact
Conservation Reserve Program (CRP)	Highly erodible land, wetland, and certain other lands with cropping history. Streamside areas in pasture land	50% cost-share for establishing permanent cover and conservation practices, and annual rental payments for land enrolled in 10- to 15-year contracts. Additional financial incentives for some practices	NRCS or FSA state or local office
Conservation of Private Grazing Land (CPGL)	Private grazing lands	Technical assistance on managing grazing lands for natural resource protection, as well as economic and community benefits	NRCS state or local office
Environmental Quality Incentives Program (EQIP)	Cropland, range, grazing land, and other agricultural land in need of treatment	Up to 75% cost-share for conservation practices in accordance with 1- to 10-year contracts. Incentive payments for certain management practices	NRCS state or local office
Partners for Fish and Wildlife Program (PFW)	Most degraded fish and/or wildlife habitat.	Up to 100% financial and technical assistance to restored wildlife habitat under a minimum 10-year cooperative agreement	Local office of the U.S. Fish and Wildlife Service
Waterways for Wildlife	Private lands	Technical and program development assistance to coalesce habitat efforts of corporations and private landowners to meet common watershed level goals	Wildlife Habitat Council
Wetlands Reserve Program (WRP)	Previously degraded wetland and adjacent upland buffer, with limited amount of natural wetland and existing or restorable riparian areas	75% cost-share for wetland restoration under 10-year contracts and 30-year easements, and 100% cost-share on restoration under permanent easements. Payments for purchase of 30-year or permanent conservation easements	NRCS state or local office
Wildlife at Work	Corporate lands	Technical assistance on developing habitat projects into programs that allow companies to involve employees and the community	Wildlife Habitat Council
Wildlife Habitat Incentives Program (WHIP)	High-priority fish and wildlife habitats	Up to 75% cost-share for conservation practices under 5-to 10-year contracts	NRCS state or local office

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