

Greater Prairie Chicken

Tympanuchus cupido

Guidelines for Landowners Using Conservation Practices

Missouri Department of Conservation

Common name ▪ Greater prairie chicken
Scientific name ▪ *Tympanuchus cupido*
State status ▪ Endangered
Federal status ▪ None

Ecology

Greater prairie chickens once ranged throughout native prairies in central North America, from southern Canada to Texas. In Missouri, they historically occupied areas dominated by grasslands, primarily in the west and north. Remaining prairie chickens exist in isolated flocks associated with the scattered prairie remnants of southwestern Missouri and the Osage Plains. A growing restored population exists in northwest Missouri, along with a less stable restored flock in the north central part of the state.

Prairie chickens prefer open sweeps of grassland comprised of bunch grasses and a wide variety of broad-leaved plants managed to provide structural diversity. They do best with a minimum of brush and trees, though they will use shrub clumps for dusting, loafing and temperature regulation. Grass strips are sometimes used for escape cover or feeding in the absence of more substantial cover, but such areas increase the impact of predators.

Prairie chickens are very mobile, with documented flights up to 17 miles. However, they depend on open vistas and expansive grasslands to avoid predators. They rarely persist in landscapes smaller than four square miles.

Prairie chickens feed on a wide variety of green browse, insects, and seeds. Diet changes with seasonal availability, with green browse preferred during spring and summer and use of crops

increasing during fall and winter months. Legumes such as lespedeza and alfalfa are selected for green browse and seed, and harbor abundant insects, which are required by chicks during the first few weeks of life.

The breeding season begins in March and extends through May, though most breeding occurs during the first two weeks of April. Cocks begin appearing on the leks, or booming grounds, as early as January to stake claim to a territory that will be defended from rival males throughout the breeding season. The birds arrive at dawn to display to the females, defend their territories and “boom.” The birds remain closely associated with leks throughout the year; feeding, nesting and raising young within a mile of the site when habitat is adequate. Hens may visit several leks before selecting a mate. Once mating occurs, the hen establishes a nest and lays 8 to 12 eggs. Over 50% of prairie-chicken nests do not survive due to predation and destruction by equipment. The peak of the hatch occurs the first week of June. Broods disband by mid-August or when the young are approximately 80 days old.



Photo Credit: Missouri Department of Conservation

Reasons for Decline

The Greater prairie chicken range has diminished as prairie and diverse grasslands have been converted to cropland or fescue pasture. Native tallgrass prairies once covered 34% of Missouri but now occupy less than 0.5% of the former range. Fragmentation of remaining habitats by tree lines along fences and draws favors nest predators such as raccoons, skunks and opossums and provides

hunting perches and nesting sites to avian predators.

Recommendations

At least 50% of the land within prairie chicken range should be maintained in quality grassland. The grasses can be native prairie or domestic cool-season species such as redbud, smooth brome or timothy that is 10 to 18 inches tall before and during nesting and a varied plant structure with some bare-ground for brood rearing. Grasslands managed with a combination of fire and planned grazing other than Management Intensive Grazing offer the best nesting habitat.

Refer to Management Recommendations for Conserving Native Prairie in Missouri for additional guidelines.

Consider the balance between adverse and beneficial practices when determining the overall effect of a conservation practice.

Beneficial Practices

- Revegetate disturbed areas with a diverse mixture of native warm-season grasses and forbs or a mix of wildlife-friendly cool-season grasses, such as redbud or timothy, mixed with legumes.
- Hay or mow prairies between July 1 and August 15 leaving 4 to 6 inches of vegetation to give prairie ample time to re-grow next year's nesting cover.
- Grasslands should be periodically burned to control woody invasion, remove excess litter and focus livestock grazing.
- Delay haying cool-season grasses and legumes until mid-June or later.
- To provide the best nesting and brood-rearing structure, patch burn one third of grazing units and graze at stocking densities recommended for the area. Rotate the burned patch to a different third each growing season.
- Leave 12 to 15 inches of vegetation at the end of the growing season to provide cover for nesting birds the following spring.
- Retain 10 to 18 inches of high grassland cover near cropland to provide escape cover.
- Remove trees from nesting, brood-rearing and lekking areas.

Adverse Practices

- Applying pesticides during the breeding and nesting season (March 1 to July 15).
- Fragmenting large tracts of open land by tree encroachment, tree planting or land development.
- Converting prairies and other quality grasslands to cropland or tall fescue.
- Severe livestock grazing.
- Prescribed burning, mowing, haying or otherwise disturbing grassland acres between May 1 and July 15 and more than 75% of the practice acres
- Using sod-forming grasses such as fescue, Bermuda and old world bluestems.

Information Contacts

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<http://www.mdc.mo.gov/nathis/endangered/>

Legal

The Missouri Department of Conservation prepared these guidelines for conservation practices with assistance from other state agencies, contractors, and others to provide guidance to those people who wish to voluntarily act to protect wildlife and habitat.

Compliance with these management guidelines is not required by the Missouri wildlife and forestry law or by any regulation of the Missouri Conservation Commission. Other federal, state or local laws may affect construction practices.

“State Endangered Status” is determined by the Missouri Conservation Commission under constitutional authority, and specific requirements for impacts to such species are expressed in the Missouri Wildlife Code, rule 3 CSR 10-4.111.