

Appendix J

Nongame Wildlife Management Recommendations

by

Matt Wagner

Texas Parks & Wildlife Department

Follow guidelines provided through TPWD's Texas Wildscapes Program for specific practices to provide food, water and cover requirements for various nongame species. Following is a list and brief description of habitats and various management practices that are beneficial to nongame species of wildlife. It should be noted that many of the practices are also beneficial to and recommended for game species (eg., deer, dove, turkey, quail, etc.). Conversely, most management practices directed at managing game species will also be beneficial to many species of nongame wildlife.

HABITAT CONTROL

Prairie/grassland restoration - Establishing a mixture of native grasses and forbs on disturbed range or farm land to provide habitat for wildlife diversity. Use the TPWD wildscape plant list. Restore and maintain mid and tall grass prairie by planting native seed stock, using species such as Indiangrass, Little bluestem, Big bluestem, Switchgrass, and Sideoats grama. Follow guidelines in Appendix K. Reduce woody plants near restored blocks of prairie to reduce incidence of predators and cowbirds. Use prescribed burning or apply selective herbicides in late summer or early fall using individual plant treatments according to recommendations provided by Texas A&M University Extension Service, Natural Resource Conservation Service and local Fire Department protocols. Summer burns are more effective at woody plant control but avoid burning during June and early July. Use rest-rotation grazing whereby one pasture in a multiple pasture system receives one year of rest on a rotational basis at least every third or fourth growing season. Pasture deferment should coincide with nesting season and seed set. Grass height of 4-12 inches is desirable for feeding and nesting cover of ground-besting birds. Delay haying until July to avoid destruction of ground-nesting birds. Avoid fragmenting large blocks of habitat. Area sensitive prairie species benefit from tracts of 125 - 250 acres or more in size. Minimize edge by restoring square rather than irregular shaped blocks. Connect scattered plots of prairie by restoring connecting corridors. If this is not possible, create restoration plots of 15-20 acres located within a mile of each other. Incorporate hayfields, improved pastures or CRP lands to minimize edge.

Forest/woodland restoration - Establishing native trees and shrubs where appropriate to restore native habitats for wildlife diversity. Use the TPWD Wildscapes plant list.

Shrubland restoration - Establishing native shrubs or small trees where appropriate to restore native habitats for wildlife diversity. Use TPWD the Wildscapes plant list. Early-successional habitats can be provided by establishing hedgerows or

plots of fruit-bearing native shrubs. Maintain brush along fencelines or shelterbelts with saplings and dense thickets of shrubs and vines for nongame birds such as Loggerhead shrike and Blue grosbeak.

Wetland restoration - Establishing water flows and native vegetation in former wetlands to provide wildlife habitat.

Riparian area management - Provide alternate livestock feeding and watering sites, exclude pastures with riparian areas from livestock grazing or fence out livestock. Defer grazing in riparian areas during April - October.

Prescribed burning - The use of fire to restore, enhance or maintain native habitats for wildlife diversity. Prescribed burns should be conducted according to TPWD, USDA Natural Resource Conservation Service, Texas Agricultural Extension Service and Texas Natural Resource Conservation Commission protocols in coordination with local Fire Department.

Mowing - Used to manage invading woody plants and maintain desirable herbaceous vegetation for wildlife food and cover. Mow before or after nesting season to avoid grassland nesting birds (most nesting occurs generally April-June).

Exotic or "weedy" plant control - Use of fire, selective herbicides, and mechanical methods to control invasive plants in important habitat types to maintain or restore wildlife populations.

Conversion of exotic vegetation - Removal and replacement of exotic vegetation with native plants for wildlife habitat.

Restore and maintain oak savannah/grassland - Prescribed burns should only be conducted according to TPWD, USDA Natural Resources Conservation Service, Texas Agricultural Extension Service, and Texas Natural Resource Conservation Commission protocols in coordination with local Fire Department. Most prescribed burns are conducted during December-March. Late winter-early spring burns will not impact cool season forbs as much as mid-winter burns. Summer burns are more risky, but could be more effective at woody plant control. If mechanical brush control is used leave brush piles for small mammals. Reseed areas with native grass/forb mixtures as necessary.

Maintain oak woodlands with dense understory - Exclude livestock during early spring, and late summer-fall and winter peak stress periods for wildlife. This allows for understory regeneration, and berry and mast production, and keeps livestock from reducing evergreen browse during periods of reduced forage availability. Maintain dense horizontal layers of understory vegetation for nesting warblers, vireos and other songbirds. Connect fragmented blocks of habitat by planting a diversity of native, fruit-bearing trees and shrubs.

Protect/restore oak-juniper woodlands - Maintain areas with mature cedar and hardwoods, the broad-leaved species (Texas oak, Plateau live oak, cedar elm, lacey oak, etc.) with at least 50% canopy cover. Control overbrowsing by white-tailed deer, exotic game and livestock.

Enhance mid-succession brush/shinnery habitat - Promote brush regeneration with prescribed fire and/or mechanical methods that remove the top-growth of woody plants but encourage root sprouting. Use proper grazing management.

Protect karst, caves and other underground resources - Construct appropriate cave gates or other features to minimize human disturbance to roosting bats. Insure quality underground water resources through proper disposal of toxicants and runoff management. Maintain unobstructed cave entrance for easy access by bats.

EROSION CONTROL

Riparian area management - Provide alternate livestock feeding and watering sites, exclude pastures with riparian areas from livestock grazing or fence out livestock. Defer grazing in riparian areas during April - October. Control erosion using water structures and native plants.

Prairie/grassland restoration - Establishing a mixture of native grasses and forbs on disturbed range or farm land to provide habitat for wildlife diversity. Use the TPWD Wildscapes plant list.

Forest/woodland restoration - Establishing native trees and shrubs where appropriate to restore native habitats for wildlife diversity. Use the TPWD Wildscapes plant list.

Trails and signs - Create walkways or paths to manage human impact and reduce erosion in sensitive areas.

PREDATOR CONTROL

Avian predator and nest parasite control – Selected avian predators (grackles, starlings, and brown-headed cowbirds) may be controlled as a part of a PLANNED PROGRAM to reduce impacts on nesting neotropical and resident songbirds through shooting and trapping, grazing management, and maintenance of large blocks of wildlife habitat.

Carnivore-furbearer control - Reduce the impact of coyotes, raccoons and other carnivores on colonial nesting birds. Control of feral dogs and cats by humane methods can enhance grassland bird nesting success and survival.

Fire ant control - Control fire ants using bait (such as Logic) or other approved product during spring-fall.

PROVIDING SUPPLEMENTAL WATER

Wetland restoration - Establishing water flows and native vegetation in altered coastal and inland wetlands.

Well/trough/pond with overflows - Establish additional shallow water supplies through construction of ground-level wildlife ponds, or adding overflow systems on existing wells and troughs. Protect these areas from livestock use. Follow TPWD Wildscapes Program guidelines and guidelines in Appendix O.

PROVIDING SUPPLEMENTAL FOOD

Establish food plots ½ to 1 acre in size by shallow discing and/or sowing native seed-producing food plants for birds (i.e., sunflower, millet, partridge pea, sesame).

Butterfly and hummingbird gardens - Establish native wildflowers, trees, shrubs, vines, or cultivated flowers as food sources for butterflies and hummingbirds. Follow the TPWD Wildscapes Program plant list.

Feeding stations - Set up liquid, seed and free-choice feeding stations for resident and migratory birds. Especially critical during migration and winter months when natural food sources are scarce. Follow TPWD Wildscapes Program guidelines.

Reduction of broadcast insecticides - Increases the amount of insects available as a wildlife food source for birds, reptiles and amphibians.

Conversion of exotic vegetation - Removal and replacement of exotic vegetation with native plants for wildlife habitat.

PROVIDING SUPPLEMENTAL SHELTER

Brush piles/rock piles - Leaving or stacking cleared brush and rock to create denning and escape cover for birds, small mammals, reptiles and amphibians. Follow TPWD Wildscapes Program guidelines.

Thickets of native brush - Create or maintain thickets of native shrubs/trees for refuge.

Prairie/grassland restoration - Establishing a mixture of native grasses and forbs on disturbed range or farm land to provide habitat for wildlife diversity. Use the TPWD wildscape plant list.

Snag maintenance and creation - Protect snags and deadfall for cavity-dwelling species. Create snags using selective herbicides or girdling undesirable woody plants.

Nest boxes and perching platforms/poles - Provide nest structures for songbirds, owls, small mammals, bats, raptors, herons, and other nongame species. Where suitable nest cavities are in short supply due to lack of dead timber snags that provide cavities or natural timber hollows, artificial nest/roost boxes can be erected to help alleviate these shortages for particular species. Some of the birds and mammals that can benefit from these structures are: bluebirds, chickadees, titmice, prothonotary warbler, wrens, woodpeckers, screech owls, kestrels, wood ducks squirrels, and bats. The TPWD Wildscapes Program can furnish additional information regarding number, specifications, placement, and maintenance of these structures for specific species.

CENSUS

Time area counts - The number of individual species seen or heard during a fixed time frame per unit area (eg., point counts for birds, squirrels).

Drift fences/pit fall traps - A system of flashing or similar material arranged on the ground to funnel small wildlife species into buried buckets or other pitfall trap. (used primarily for reptiles and amphibians).

Small mammal traps - Small live traps arranged along a trapline to sample small mammals.

Other or Indicator Species: Bobwhite quail, dove, and wild turkey may be desired game species to have in the area, which may be expressed in the overall objective. The land management techniques that have been recommended primarily for the deer population (**Appendix F**) can benefit these game birds and many other non-game species of wildlife also. These are: prescribed burning, disking, cattle rotation or exclusion from woods and certain native grass areas during certain periods, and supplemental food plots. See **Appendix G** for more information on quail and **Appendix H** for turkey.

Nest/Roost boxes for Cavity Nesters/Roosters: Where suitable nest cavities are in short supply due to lack of dead timber snags that provide cavities or natural timber hollows, artificial nest/roost boxes can be erected to help alleviate these shortages for particular species. Some of the birds and mammals that can benefit from these structures are: bluebirds, chickadees, titmice, prothonotary warbler, wrens, woodpeckers, screech owls, kestrals, wood ducks, black-bellied whistling ducks, squirrels, and bats. The TPWD Nongame and Urban Program can furnish additional information regarding number, specifications, placement, an maintenance of these structures for specific species.

Neotropical Migratory Birds: These are birds that breed in the United States and Canada, and migrate to the Neotropical regions of Mexico, Central and South America, and the Caribbean during the nonbreeding season. As mentioned in the General Habitat Management section at the beginning of this example plan, loss and fragmentation of woodland and native grassland habitat has reduced populations of many neotropical populations. Neotropicals include the following groups of birds: kites,

hawks, falcons, owls, cuckoos, nightjars, hummingbirds, flycatchers, swallows, thrushes, vireos, warblers, tanagers, grosbeaks, buntings, sparrows, orioles, and blackbirds. For more information regarding neotropical status, surveys, and possible management strategies, contact the Partners in Flight Program Coordinator at TPWD Headquarters in Austin.

Birds of management concern for Edwards Plateau and Cross Timbers and Prairies region include:

- Golden-cheeked Warbler
- Black-capped Vireo
- Bell's Vireo
- Painted Bunting
- Montezuma Quail (very localized)
- Black-chinned Hummingbird
- Rufous-crowned Sparrow
- Scissor-tailed Flycatcher
- Cave Swallow
- Gray Vireo (SW part only)
- Canyon Towhee
- Cassin's Sparrow
- Orchard Oriole
- Northern Bobwhite
- Yellow-billed Cuckoo
- Elf Owl (SW part only)
- Louisiana Waterthrush

Waterfowl/Wading Birds: To improve the habitat for dabbling ducks and wading birds, construction of 3 - 4 foot high levees with a drop-board water control structure in suitable low areas could back up and hold water during the fall, winter, spring, summer months, depending on water management strategy. This could provide shallow (6 to 24 inches) water feeding areas for migrant ducks, wading birds, and spring-nesting wood ducks.. Exclude livestock from this area with installation of an electric or barbed wire fence around the perimeter, at least 50 yards away from the maximum flooded area. Contact the local Natural Resources Conservation Service or TPWD waterfowl biologist for assistance in location and construction of the levee.

Installation of wood duck nest boxes in and around the edge of shallow water areas can increase nesting sites for wood ducks that are normally present in the summer, but lack suitable nesting sites due to lack of natural cavities in older, damaged trees or lack of these type of trees. One nest box (not within view of other nest boxes) per acre of brood-rearing wetland habitat is usually sufficient. These should be erected on 10 foot metal or treated wooden posts in or at the edge of wetlands.

Feral Hogs should be controlled by shooting and live trapping whenever possible. Most success at this usually occurs during the winter when feral hogs are having to travel

more to find food. Beside rooting up pastures, feral hogs compete directly with deer, turkey and most other wildlife species that rely heavily on acorns and other hard and soft mast for winter food. Deer also tend to avoid areas when feral hogs are present.

Other Comments: The development of a Landowner Wildlife Management Association with adjacent and neighboring landowners will greatly enhance any management that you apply to your ranch, and is strongly encouraged. TPWD and TCE personnel are available to assist in this endeavor.