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A publication of the Oklahoma Department of Wildlife Conservation.



Department Loses a Friend

By John Hendrix, private lands wildlife biologist

Just a little over a year ago we decided to develop a newsletter for Oklahoma landowners. Brian Barger took the lead and began to develop the format, content, and the style of this newsletter. His love for his work gave us a newsletter that we all are very proud of. His extra thoughts, like the quail at the end of each article, the informational format design, the wonderful reading flow of the layout, and his color combinations created a sharp newsletter.

He served as an intern beginning in March 1998. He was then hired full time in January of 1999. Predominately a photographer for Outdoor Oklahoma television and later editor of the magazine, he also developed the weekly news release and was an active Aquatic Education instructor,

Hunter Education instructor and a project WILD facilitator.

Because Brian was such an asset to the Department, we were saddened when Brian passed away in his sleep on Nov. 8 at the age of 31.

There are a lot of people who go to work everyday and do a good job. But to be great you must be committed, dedicated and completely devoted to the cause for which you work. Brian's passion for carrying out the Oklahoma Department of Wildlife Conservation's mission was evident to all those who knew him, and his positive, professional attitude reminded us here at the department to always put our constituents, and conservation first.

The Department will now continue on with our mission, we know you have enjoyed his outstanding efforts during his wildlife career. Brian will be missed by our Department family and his own.



Brian Barger

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Oklahoma Department of Wildlife Conservation Mission

Statement: Managing Oklahoma's wildlife resources and habitat to provide scientific, educational, aesthetic, economic and recreational benefits for present and future generations of hunters, anglers and others who appreciate wildlife.

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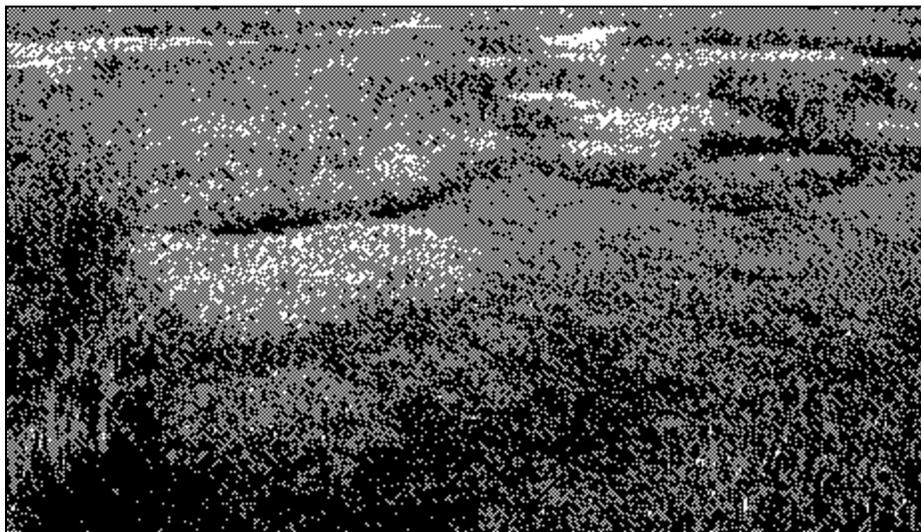
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Partners for Fish and Wildlife Program

A cost-share assistance program available to Oklahoma landowners who need assistance with habitat work



Wetland Restoration Project completed on private land in Oklahoma

The U.S. Fish and Wildlife Service (FWS) is the federal government's lead agency for conserving and managing the nation's fish and wildlife resources. The Partners for Fish and Wildlife Program has been designed to assist private landowners in wildlife habitat restoration and other enhancement activities, including assistance to educational institutions. In Oklahoma, 97 percent of the land is in private ownership. Wetlands and other wildlife habitat on these privately owned lands provide untold potential for restoration and enhancement. Wildlife management projects can fit well with most farming and ranching operations. Technical assistance and financial incentives are available from the FWS to landowners interested in improving the status of wildlife and important habitat on their property.

As a Cooperator you would agree to:

- Use funds for wetland or other approved wildlife related projects, by contracting for construction activities and fund any remaining costs of the project.
- Manage and maintain for at least 12 years your project for the benefit of wildlife.
- Restrict timber cutting and control livestock grazing in the project area.

Objectives of the Partners for Fish and Wildlife Program:

Restore, enhance, and manage private lands for fish and wildlife habitat.

Significantly improve important fish and wildlife resources while promoting compatibility between agricultural and other land uses.

Restore declining species and habitats.

Promote a widespread and lasting land-use ethic.

Technical and Financial Assistance for:

- Wetland Restoration
- Stream Restoration
- Outdoor Classrooms
- Invasive Species Control
- Native Habitat Restoration
- Endangered Species Riparian Buffers

Oklahoma's Partners for Fish and Wildlife Program

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Prescribed Fire

New Rules to Reduce Liability for Landowners

By John Hendrix, private lands wildlife biologist

Oklahoma State University has estimated that over a million acres of rangeland and forestland are burned on purpose in Oklahoma each year. Landowners use prescribed fire as a tool to manage vegetation for wildlife, livestock production, and other land management reasons.

Prescribed fire is an inexpensive tool that can be used to maintain and improve wildlife habitat. Oklahoma's rangeland has evolved with fire as a natural process for thousands of years. Without fire these ecosystems can become unproductive for many wildlife species such as the bobwhite quail. Fire suppression in rangeland can also result in the invasion of an undesirable woody species such as eastern red cedar.

Oklahoma was one of the few states without a prescribed fire law to protect landowners conducting a prescribed fire on their property. However, during the 2001 legislative session, Senator Harrison and Representatives Sweeden and Braddock sponsored House Bill 1633 for landowners and tenants who use prescribed fire as a management option. This bill was an attempt to reduce the liability for the landowner when prescribed fire was done following the set guidelines in this new bill. The bill passed and was signed into law this past spring, but some modifications may be made during the 2002 Legislative session.

Landowners can be protected from some liability if a prescribed fire gets away only if they follow the guidelines as set forth in this new law. If a landowner continues to use prescribed fire without following these guidelines, then they are not protected by the new law and could face severe liability if a prescribed fire escapes their control.

The Oklahoma Department of Agriculture, Forestry Division, is the agency that is required to implement and oversee this new law. Kurt Atkinson, assistant director for the Department of Ag, said they have nearly completed an informational packet for landowners who use prescribe fire as a management tool on their properties. This packet contains a copy of the new law, the prescribed burning notification plan form, guidelines for a safe burn, and a description of the forest protection area in the state. Landowners who are interested in this packet can call the Department of Agriculture, Forestry Division, at 405/522-6158.

This law was developed for landowners so they can keep prescribed fire as an option to use as an inexpensive management tool on their properties. I encourage landowners who are currently using fire as a management tool to contact the Department of Agriculture to get a packet and read the information. Then complete the simple burn plan and submit the plan to the nearest rural fire department prior to conducting a prescribed fire. This should be completed soon if you are going to burn for wildlife benefits during the month of January and February. If you have further questions or need help completing the burn plan please give me a call at 405/880-0994.

The following are some of the guidelines of the new prescribed fire law:

- * *Requires landowners to complete a simple burn plan prior to conducting a prescribed burn.*
- * *Landowner is required to notify all adjacent landowners that joins the property to be burned within sixty days prior to conducting the burn.*
- * *Landowner must notify their local rural fire department nearest to the land to be burned within 48 hours of the burn and submit the completed burn plan to them.*
- * *Landowners who burn within the forest protection area of the state are also required to notify the local office or local representative of the Forestry Division at least four hours before a burn is conducted.*

Prescribed fire is an excellent tool to manage vegetation and livestock production. Over a million acres of rangeland and forestland are burned on purpose in Oklahoma each year. A packet containing the new burn law, the prescribed burning notification plan form, guidelines for a safe burn and a description of the forest protection area in the state can be obtained by calling (405) 522-6158.



Management of Developed Wetlands in Oklahoma

By Alan Stacey, wetlands program coordinator

One of the most common questions I hear asked by landowners or waterfowl hunters during the summer months is "what can I plant in my wetland to attract waterfowl for the upcoming fall and winter period?" It's certainly a legitimate question but one which often prompts me to ask a few questions about where the wetland is located, whether it dries out in a normal year, and what type of vegetation is currently growing in it.

Although there is certainly nothing wrong with planting milo, Japanese millet or other cultivated crops in or around an evaporating or dry wetland, there is often a better alternative. Better in terms of being more cost-effective, requiring less manpower effort, meeting the nutritional needs of waterfowl, and diversifying habitat for a variety of ducks and other migratory birds to use.

The increasingly popular method used to accomplish such objectives is called "Moist Soil Management." Through proper management, this method encourages desirable native "moist soil" plants which are neither true aquatic plants nor are they typically found in drier upland habitats. These plants are most commonly found in temporary or seasonal wetlands that go through an annual wet/dry cycle. Wetlands which tend to dry out one or more times a year are the most productive wetlands in terms of producing food for migratory birds.

Seeds produced by desirable moist soil plants are just one source of food for many kinds of dabbling ducks (ducks which "tip up" to feed vs. diving underwater). Aquatic insects (e.g., snails, crayfish and insects), waste grain from crops, tubers, and leafy portions of vegetation are also used by various waterfowl and other migratory birds depending on the time of year and type of bird species.

A point being supported by continued waterfowl research shows that dabbling ducks use a variety of habitats and food resources throughout the fall and winter in order to meet their basic nutritional needs as well as other life requirements. Although moist soil plants are just one of those sources, they have several advantages over planted crops. More specifically, seeds of many moist soil plants provide a much more balanced diet including essential amino acids, vitamins, and min-

erals necessary for a dabbling duck to complete its annual life cycle. When flooded, seeds produced by these plants generally have slower deterioration rates as compared to planted crops, thus making the food source available over a longer period of time. Additionally, native moist soil plants are well adapted to Oklahoma's extreme and varied climate and often tend to be more consistent seed producers than planted crops.

So what are the key ingredients for encouraging the growth of desirable moist soil plants? Unless your wetland is a newly-created wetland, say on an upland site, most existing or restored wetlands have a seedbank of moist soil plant seeds already present within the soil profile near the surface. This seedbank likely consists of a variety of seeds which are adapted to remaining dormant until the right conditions (namely soil moisture, soil temperature and some type of disturbance) stimulates them to germinate. Many of these plants have a hard seed coating which allows them the capability to remain viable for many years. As an extreme example, the seed of dock, a common moist soil plant often found in fallow ag fields, has been documented to germinate after laying dormant for nearly 70 years! Unless your wetland has been farmed "clean" for several consecutive years, it probably already has a diverse seed bank requiring no planting or overseeding on your part.

The first requirement needed to manage for moist soil plants is having the structural measures in place to implement a controlled drawdown (removal of some or all of the water). Usually, this drawdown process consists of draining the wetland during a specific part of the growing season through a water control structure. Two of the three most critical aspects of moist soil management involve both the rate and timing at which the drawdown occurs. All moist soil plants are annuals, in other words, they come up from seed every year. The most desirable moist soil plants (in terms of food for dabbling ducks) require a slow drawdown in order to allow them to germinate and develop proper root growth. This relates back to the amount of time in which moisture is present within the upper soil surface. Wet, saturated soil allowed to slowly dry is conducive to germinating desirable plants such as annual smartweeds and sedges,

barnyardgrass or wild millets, bidens, panic grasses, pigweed, sprangletop and others.

Factors which can influence soil drying rates when conducting a drawdown include both topography within the wetland (flat topography vs. sloping relief within the wetland), rainfall, and evaporation rates. Although each site usually has its own unique characteristics, as a general rule of thumb, most slow drawdowns should be initiated between March and June over no less than a three-to-four week period. The only exception to slow drawdowns would be to quickly dump the water prior to soil temperatures warming up (in Okla., prior to mid-late March). Dumping the water quickly (1-5 days), particularly during the months of May-July when soil temperatures and evaporation rates are higher, often results in stands of similar vegetation and promotes plants which have little seed value for migratory birds. In Oklahoma, a few of these common plants include cocklebur, coffeebean, annual sumpweed, morning glory, ballonvine, and salt marsh aster.

The second most important aspect of moist soil management involves timing of drawdowns. Some desirable moist soil plants such as ladythumb smartweed, for instance are, well adapted to early season drawdowns (prior to May 15). In some years, this plant has been observed to germinate as early as the last week in February. Plants responding to early season drawdowns usually develop adequate root systems before dry summer weather sets in. This is especially important in typical wetland soils such as heavy clay and silt which often "crust over" when hot temperatures set in later. Newly established seedlings are often subject to spring flooding and can be "drowned out" if flooded for extended periods.

Observing plant growth height combined with precise monitoring of water levels to ensure spring rains do not overtop seedlings/young plants for extended periods is essential. Mid-season drawdowns (May 15-July 1) often promote plants such as wild millets and other annual grasses. Although good germination response usually occurs, plants have a greater potential to suffer from less soil moisture, resulting in stunted growth and a reduction in seed production. This is where mother nature can make the difference in producing a fair

Management of Developed Wetlands in Oklahoma continued

seed crop versus a fabulous one through timed rainfall events in late June and into July. If by chance you have the luxury to irrigate your wetland (independent water supply source) during this time frame, you can consistently produce a bumper crop of native foods on a year-in and year-out basis.

Lastly, a late season drawdown (after July 1), is the least consistent in terms of seed production, however, critical rainfall in late August/early September have been known to produce a "second crop" of food, particularly with annual sedges, bidens, panic grasses and sprangletop. Once plants are up and growing during this late season, the real key is having enough time for plants to mature and "set seed" before the end of the growing season in late October.

The last critical ingredient in managing for moist soil plants is disturbance. As a moist soil manager, your goal is to encourage annual plants since they consistently produce a greater abundance of seed. Additionally, they are more highly sought after by dabbling ducks and other migratory birds than seeds produced by perennial plants. Through natural succession, perennial plants will begin to become established and out compete annual plants after three to four years. Although there are several tools a manager can use to create disturbance (mowing, deep flooding, approved herbicides, controlled burning), disking is probably the most common and effective method used. Every two to four years, you will need to disc your wetland to promote annual moist soil plants. If you have multiple wetland units, a good strategy would be to rotate disking in alternate years for each unit. If

only a single wetland unit is being managed, strip disking every second year might be a good alternative, promoting plant diversity. Regardless, most, if not all disking will likely be done in the summer or fall months. Although the area disked usually ends up sacrificing any potential growth of plants (and potential food for waterfowl that season), just think of it as managing for next year's crop. Besides, other migratory birds such as shorebirds will potentially use your disked area the following spring if allowed to flood. Mudflat zones created through controlled drawdowns or evaporation during the months of April and May will allow invertebrate foraging opportunities for many types of shorebirds and other migratory birds.

Being successful at moist soil management requires a little patience and effort in experimenting with your wetland, thus allowing you to gain some knowledge base. Each site has its own unique factors (soils, farming history/seed bank, topography, hydrology, etc.) so it is often inappropriate to assume management recommendations for one site will apply to another. However, with a little patience, you can begin to reliably predict results of your drawdown efforts after two or three growing seasons. The results of these learning efforts can be extremely gratifying when you can produce quality waterfowl habitat which in many ways is better than just planting your wetland to a traditional crop.

Management Measures

January

Wildlife Habitat

- Install wood duck nest boxes
- Strip disk to encourage native food resources.
- Prepare ground for tree and shrub establishment.
- Evaluate and record food resources for wildlife.

Ponds

- Cut cedar trees and stockpile for fish habitat.
- Trap muskrat and beaver as needed.
- Catch and remove crappie.

February

Wildlife Habitat

- Plant trees and shrubs as needed for cover.
- Strip disk to encourage native food resources.
- Monitor turkey flocks
- Clean out nesting structures and boxes.
- Apply fertilizer to mast producing trees.

Ponds

- Cut cedar trees and stockpile for fish habitat.
- Catch and remove crappie.

March

Wildlife Habitat

- Prepare ground for summer food plots if needed.
- Plant native grasses, forbs and legumes.
- Monitor/fluctuate water levels in wetland areas.
- Conduct prescribed burns as needed.
- Plan a grazing management system

Ponds

- Trap and remove beaver.

April

Wildlife Habitat

- Plant native grasses, forbs and legumes.
- Clean and store prescribed burn equipment.
- Disk wetland areas to encourage moist soil plants.
- Implement a planned grazing system.

Ponds

ODWC Names Landowner of the Year

Arnett landowner Kenny Knowles was named as the 2001 Landowner Conservationist of the Year by the Oklahoma Department of Wildlife Conservation at the October meeting of the Oklahoma Wildlife Conservation Commission.

Knowles is a third generation farmer and rancher and was presented the award for his outstanding efforts to enhance wildlife habitat on 11,000 acres he owns and manages in Ellis County.

"Numerous pages could be written describing Knowles' lifetime contribution to wildlife and habitat management," said Russ Horton, central region senior biologist for the Wildlife Department. "He realized long ago that sound wildlife management could complement a profitable ranching operation. He has taken a leadership role in promoting multiple species stewardship of the land, with wildlife given the highest priority.

"He now has, and will always have, some of the best wildlife habitat in Ellis County, not as a result of luck, fortune or fate, but rather due to his love for wildlife and his dedication to ensuring that wildlife will always be extended a hearty welcome on all properties he manages. He is very deserving of recognition for his outstanding, life-long dedication to sound wildlife management on private lands."

Knowles has a very good rotational grazing plan that ensures good wildlife nesting cover, Horton added. He is also in the process of converting 1,500-acres of farm ground to a mixture of native plants that will provide beneficial wildlife habitat.

"I am very honored to be recognized for the work I am doing to help wildlife," Knowles said. "Wildlife has always been a priority for my family and it will continue to be so throughout my lifetime."

An avid angler and hunter, Knowles really enjoyed hunting prairie chickens and his management activities and leadership have played an integral role in prairie chicken restoration efforts.

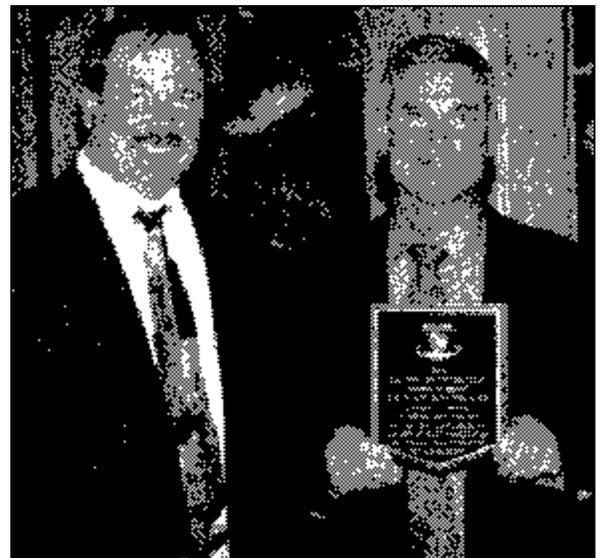
"He maintains a journal of habitat work and tries to keep records of lesser prairie chickens using his property for habitat use and population information," Horton said. "He has been a huge influence in the local community for wildlife related work. Other landowners are

seeing his results and are beginning to take his lead."

Knowles has traveled to Washington, New Mexico and Mexico to share his knowledge, experience and support of the Lesser Prairie Chicken Interstate Working Group with policy makers and other ranchers and conservationists, Horton added. He also has urged neighboring landowners to consider the benefits their land could provide for wildlife.

Those interested in more information on the Department's Landowner of the Year program can contact John Hendrix, the Department's private lands biologist at 405/880-0994.

To be considered for the prestigious award, landowners must demonstrate a commitment to managing their property to provide benefits for wildlife.



John Hendrix (left), private lands wildlife biologist for the Oklahoma Department of Wildlife, recently presented Kenny Knowles (right) with the 2001 Landowner of the Year Award. Knowles, who owns and manages 11,000 acres in Ellis County, was recognized based on his dedication to wildlife and land management.

Quail Habitat Loss and Fragmentation

By Mike Sams, upland game biologist

Habitat loss comes in many different shapes and forms, some of which are obvious and some that are very inconspicuous. Obvious losses such as the expansion of urban communities seldom need an explanation. After all, there is no disputing that when a plum thicket is bulldozed and a parking lot built, it's lost and will never hold another covey.

Subtle losses of quail habitat are equally as devastating. A pasture planted to bermuda, fescue or old world bluestem is the same as a parking lot in the eyes of a quail. For quail, severely grazed native pasture and a parking lot differ only in the cars parked on top of the latter. Both over-grazing and non-native pasture have deficiencies in quail habitat without an outwardly apparent loss of habitat.

Subtle losses of quail habitat are often gradual shifts occurring over a long period of time. One of the most common shifts in Oklahoma's landscape has been the increase of trees in native prairies. Just as this transformation has been gradual, so too has its effects been gradual on quail populations.

The most subtle and least understood form of habitat loss is fragmentation. Fragmentation refers to the arrangement of suitable and unsuitable habitats within a landscape. Severe forms of fragmentation can prevent individual movement between suitable habitats and isolate quail populations.

Direct habitat loss is apparent, you build a parking lot and you don't have quail anymore. On the other hand if you isolate 700 acres of ideal quail habitat it is likely no better than a parking lot when comparing the existence of quail over the next 20 years.

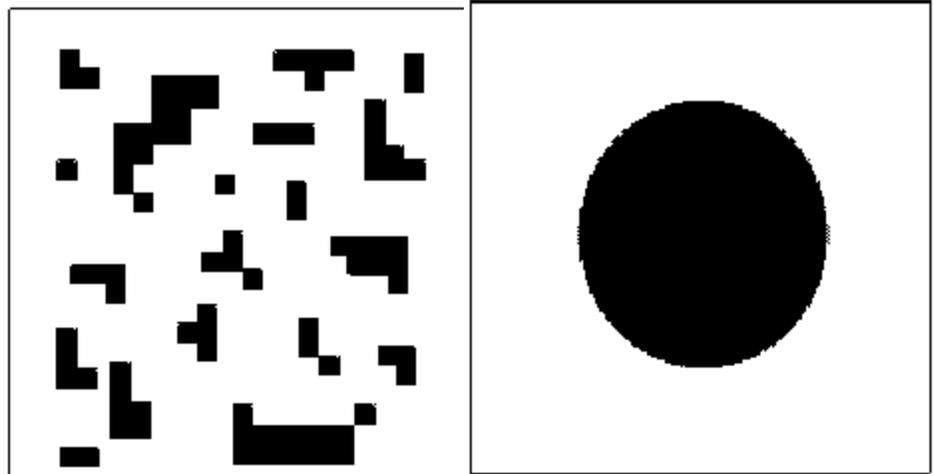
Scientific studies suggest that 800 quail are needed to ensure enough individuals are present to repopulate an area following weather catastrophes (droughts, snow, etc.). This translates to a habitat requirement of roughly 3,000 to 8,000 acres.

So that 700-acre ranch that once provided fair quail hunting and still has excellent habitat may not have quail following five

years of drought and last year's severe winter weather. If those acres are isolated, we call their quail populations "zombies," which refers to the inevitable disappearance of the birds over time. Isolated habitat cannot support long term populations of quail. The only question is how long can they hold on?

Scenarios such as these, which don't lend themselves to casual perception, may lead people to discredit habitat loss as the principle factor behind declining quail populations, but the effects are real.

So what are the management options for wild quail in heavily fragmented landscapes? Unless you own or manage 3,000 to 8,000 acres, quail management requires neighbors working with neighbors. Stay tuned to "Your Side of the Fence" to learn more about forming Landowner Cooperatives.



Heavily Fragmented

Not Fragmented

Fragmentation refers to the arrangement of suitable and unsuitable habitats within a landscape. Severe forms of fragmentation can prevent individual movement between suitable habitats and isolate quail populations.