Winter 2017 *A Publication of the Oklahoma Department of Wildlife Conservation's Private Lands Section*

Should Landowners Wait for the Rangeland Benefits of a Wildfire?

By Scott Parry, Northwest Region Wildlife Supervisor

"Why do you burn so much?" That was a question posed by my youngest daughter not long ago. While it's true that I participate in prescribed burns regularly, this time I was returning from a wildfire that I had been paged to as a volunteer fireman. I told her I wasn't burning this time, but working with the fire department on a wildfire. She pondered that and then asked, "What's the difference?" Either way, when I return home I smell like smoke, have black stuff smeared on my face and hit the shower the first chance I get. Also, there is burned ground at the fire location regardless of the origin. What is the difference between a wildfire and a prescribed burn? In this context, both fires are rangeland fires that result in burned acres. Instead, let's ask: What are the wildfire or prescribed fire effects on rangeland? After all, I know my rangeland needs burned for various reasons, but I can wait for a wildfire and get the benefits of a burn without assuming the liability and risk and have the same results, right? Maybe. Well, maybe not.

What is a prescribed fire?
These fires are lit intentionally and legally, within certain weather parameters, to meet certain management objectives. A prescribed fire can also help reduce fuel (grass, leaf litter, fallen logs, etc.) which helps reduce the intensity of a wildfire, if one were to happen. Prescribed fires are guided by a burn plan, written prior to ignition, which describes the conditions a prescribed fire will be lit and how fireguards will be placed. The plan also identifies who will be notified the day of the burn and who will be called if a problem arises. The land manager decides when and where to apply the fire. Because of this, prescribed burns are typically milder than wildfires and usually leave patches of vegetation unburned. Prescribed fire is a planned and applied management tool that achieves specific results. Typically, fireguard construction is the only ground disturbance required and that placement can be decided by the land manager.

Many landowners I speak with recognize prescribed fires as a useful tool, but they are often concerned the fire may escape and that neighboring landowners will sue. While this can happen – when you apply fire on your place you assume liability if the fire were to escape and cause damage elsewhere – the risk is low. A survey of 50 Prescribed Burn Associations found that of the 1,094 fires conducted in an 18 year period, only 16 fires (1.5 percent) escaped. Prescribed fire, when implemented correctly, is typically much safer than perceived and is a relatively inexpensive way to manage your property. The key is to have well-prepared fireguards and a well-written burn plan with weather parameters, personnel and equipment needs identified and to light only when the current weather conditions, forecasted conditions, personnel and equipment are well within the parameters of the burn plan.

What about wildfires?
Wildfires frequent Oklahoma's

Your Side of the Fence

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landscape. According to the National Interagency Fire Center, Oklahoma had 1,309 wildfires that burned 100,382 acres in 2015. That was a relatively slow year. In 2016 starting in Woods County, Okla., the huge Anderson Creek wildfire burned almost 400,000 acres alone. So, is wildfire good or bad? As a general rule, fire is a naturally occurring process and wildfires can address invasive plant issues and regenerate plant communities. But there are many more factors to consider. Wildfires happen without regard to when and where the land manager would want and can occur on any day, year round, in Oklahoma. Even so, larger wildfires are often associated with the dormant season (Nov. – March) on days with low humidity and/or high winds. These conditions often result in a higher fire intensity and speed than you would see with a prescribed fire. This means more land – and more vegetation – is typically burned. For example, cottonwood trees along a creek would likely survive a prescribed fire, but may be eradicated by a wildfire, leaving an area without any roosting trees for wild turkeys. Wildfires can vary greatly in terms of rate of spread or speed, but in extreme conditions can move much faster than a prescribed fire. This greatly reduces the chances of wildlife survival within the burned area.

As a landowner, you may be thinking, "I'm only interested in upland species and don't need roosting trees. I know that other animals will move in from neighboring areas, so I'm willing to wait for the rangeland benefits of a wildfire." This is where I could nearly write a book about what can go wrong during intense wildfire conditions and what happens when fire units show up to put out the fire.

The primary job for fire departments in a wildfire situation is to extinguish the fire as quickly and safely as possible while trying to protect all structures possible. Getting as many suppression units on site as fast as possible, along with heavy equipment to cut fireguards, is a leading priority. I have seen firebreaks created up to four maintainer blades wide through the middle of pastures, across boundary fences (with the fences cut), through trees, fields, hay meadows and around yards. These fireguards are often created very rapidly, without regard to where the manager would like for them to be installed long-term. Additionally, dozers and maintainers are unloaded in the first available location – often in driveways, bar ditches and wheat fields. Additional property damages are realized when the landowners find burned fences, corals, windmills, solar pumps, tanks, and heavy equipment that can't be easily moved. In the end, prescribed fires rotated across your property could improve the rangeland and minimize costly, damaging wildfires.

While it could be argued that a wildfire can have some positive value, the hassle of fence restoration, damage caused by fire-fighting equipment, threats to structures, livestock and humans, as well as the expense to communities, counties and state agencies may be a far bigger negative. A prescribed fire, with the land manager choosing firebreak placement and timing of ignition, can lead to a successful, productive and safe fire that will help accomplish management objectives.

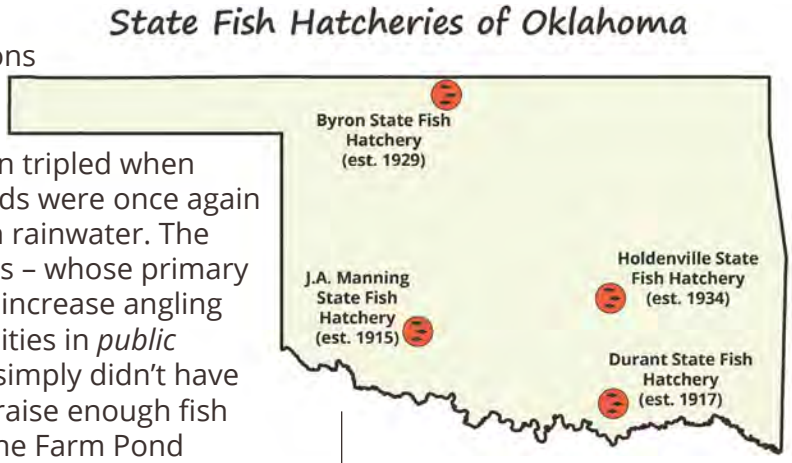
Behind the Scenes with the Farm Pond Program

By John Davenport, Hatchery Supervisor - Holdenville State Fish Hatchery

Ask an Oklahoma angler about their first fish and the stringer of memories will often trace back to a familiar starting point – a family member's farm pond. Because these privately-owned ponds have time and again "hooked" beginning anglers, the Wildlife Department is dedicated to helping landowners make these ponds productive. One way to do that is by providing fishing license-holding landowners with a source of quality fish.

Since the 1940s, the Wildlife Department's four state fish hatcheries, located near Durant, Holdenville, Lawton and Burlington, have set aside resources to raise fish specifically for privately-owned farm ponds. More than 70 years later, the popular Farm Pond Program has created a demand it struggles to satisfy.

Hundreds of landowners apply for a share of the bluegill sunfish, channel catfish and northern largemouth bass raised through the program each year. But in 2015, applications to the program more than tripled when farm ponds were once again filled with rainwater. The hatcheries – whose primary goal is to increase angling opportunities in *public* waters – simply didn't have space to raise enough fish to fulfill the Farm Pond Program requests. The Wildlife Department expects to have a similar demand, one that exceeds production capacity, in the coming year. Even so, hatchery ponds are being prepped for the upcoming spring so that quality fish can be offered to Oklahoma's anglers.



Raising Sunfish and Catfish

Two of the species offered in the Farm Pond Program, sunfish and catfish, are also raised for the state's larger Lake Stocking Program. The broodstock, or parent fish, of both species begin spawning in late May when their individual pond's water warms to around 72 degrees.

While the sunfish eggs are allowed to develop in their fertilized pond of origin, eggs from the catfish pond are collected twice a week and transferred to a specialized hatching tank. There, the catfish eggs are fanned until they hatch into small fish, or fry. The juvenile fish are moved to a series of rearing tanks where they receive a high-protein feed mixture. After two weeks, the catfish are about an inch long and are moved to a larger rearing pond. Biologists weigh a sample of the growing fish each week and adjust their twice-daily feeding to equate to four percent of the catfish's body weight. By Labor Day, the catfish are 2 inches in length, the sunfish half that, and both species are ready to be distributed to the waiting landowners.


Rich Fuller/ODWC

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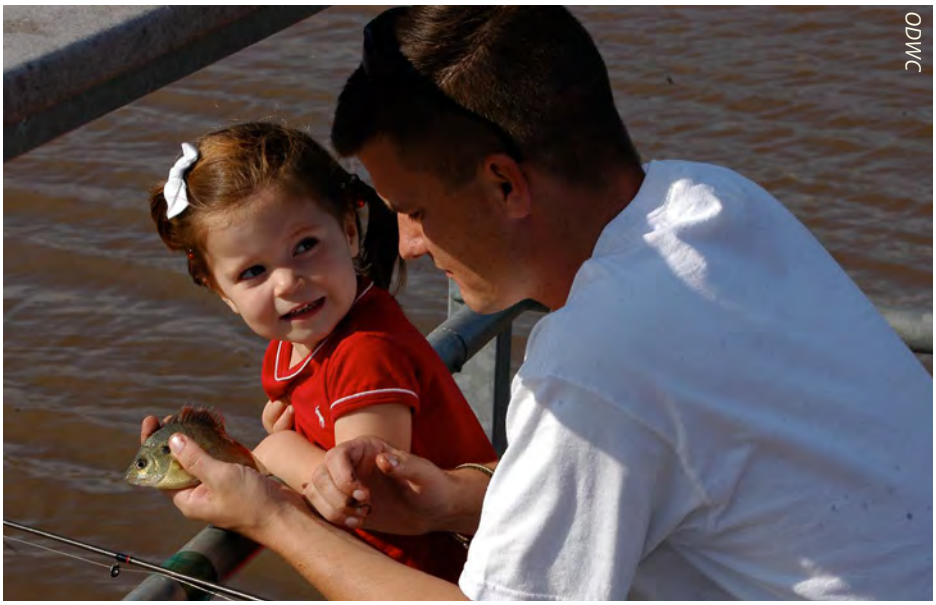
Water Matters, cont.

Behind the Scenes with the Farm Pond Program, cont.

Growing Bass

In April, seven months after the bluegill and catfish are issued, the hatcheries shift their focus to pairing northern largemouth bass broodstock. Unlike the sunfish and catfish, this bass variety is grown only for the Farm Pond Program. A little more cold-hardy, the bass begin spawning when water temperatures reach 62 degrees. After a few days, the ½-inch bass fry are swimming near the top of the water, a signal to hatchery staff that the fish are ready to be scooped out of the spawning pond and transferred to a fertilized rearing pond. Farm Pond Program applicants return to the hatcheries two months later (early June) to pick up the two-inch bass.



Why the nine-month (September to June) wait to receive bass? Landowners who overwinter the catfish and bluegill in the newly-stocked farm ponds give the fish time to adjust to their new pond and find hiding spots before bass, carnivorous fish, are introduced. This waiting period also gives the bluegill time to hatch their first brood of young; which will serve as food for the growing bass. A productive fish, bluegill replace their sacrificial first brood each month of the summer growing season. By staggering the stocking times of the prey fish (bluegills) and predatory fish (bass) landowners and hatcheries can partner to create a balanced pond fishery.

Does Your Pond Qualify?

Need help getting your ½ - 5 acre-pond ready for family members and friends? Send an application to the Farm Pond Program by May 31 for a chance to receive fish. Applications received June 1 will be eligible for next year's Program. Eligible ponds cannot have an existing fish population, the owner cannot offer fishing at the pond for a fee, and Game Wardens must be allowed to check for fishing licenses (if required) at that pond. Receiving fish from the Program does not require the landowner to offer fishing access to the public. For more information or to get an application go to wildlifedepartment.com/lands-and-minerals/farm-ponds.

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Landowner Spotlight

The Gearharts – Making and Maintaining Memories

By RosaLee Walker, Private Lands Biologist

Roy and Robbie Gearhart own a few properties in Seminole county which total close to 430 acres that they actively manage for wildlife. They are assisted in this task by their children; Ivan and Lydia. Mr. Gearhart grew up hunting and fishing and wants his children and grandchildren to have the same opportunity to experience and enjoy the outdoors.

"Some of my favorite memories are of my kids getting their first deer and turkey."

Mr. Gearhart initially started his land management by clearing eastern redcedars and brush for his cattle and subsequently noticed an increase in wildlife. This revelation prompted Mr. Gearhart to look further into improving the areas for wildlife which ultimately led him to sign up for the Wildlife Habitat Improvement Program managed by the Wildlife Department. Through the program, Mr. Gearhart was able to develop a long-term wildlife habitat conservation plan as well as receive financial assistance for completing practices that enhance and improve wildlife habitat on his property.

Since beginning the program Mr. Gearhart and his family have installed firebreaks in preparation for prescribed burns and have removed additional eastern redcedar trees and brush. Their hard work has stimulated the growth of beneficial native range vegetation that provides nesting cover for turkey and quail as well as forage for many species of wildlife.

The wildlife habitat improvement practices completed by Mr. Gearhart have already resulted in an increase of wildlife use on the property and Mr. Gearhart plans on continuing the work to achieve even better results. He plans to continue removing cedar and brush and eradicating sericea lespedeza, an invasive, non-native plant. His ultimate goal is to create and maintain an area where wildlife will want to stay rather than roam through and leave as well as a place where they can receive the nourishment they need to thrive and stay healthy.

Roy and Lydia Gearhart pose for a photo with Lydia's first buck.

Tech Note

When to Drawdown Wetlands for Duck Habitat

By David Banta, Wildlife Technician

While spring is a time when many waterfowl enthusiasts are putting away their gear, and dreaming about the return of their favorite birds the following fall, it is also the time when other wetland managers are actively implementing a water drawdown strategy in their units that will, hopefully, produce lush stands of valuable and desirable moist-soil plants.

Creating lush stands of valuable and desirable moist-soil plants, like smartweeds, results from well-timed wetland drawdowns.

Indeed, a drawdown that is well-timed and of proper duration, is one of the most effective tools in wetland management. It can allow a wetland manager to directly influence the composition and production of moist-soil plants, optimize food production, and provide a nutrient-rich habitat for the exhausted and depleted fall migrants.

First, let's talk about timing of drawdowns. They are often described in general terms such as early, midseason, or late. In our part of the country, where our growing season exceeds 200 days, early drawdowns are carried out from mid-March through late April, midseason drawdowns from early May through late June, and late drawdowns after July 1st.

I have found that during most years, early and mid-season drawdowns result in the best quality of desirable moist-soil plants, as well as the greatest quantity of seeds produced. Since summer droughts are common in our area, plants that germinate following an early or early-midseason drawdown have time to develop adequate root systems before hot and dry conditions arrive, which will often stunt production of plants that germinate during the latter-midseason or late drawdown

Native Plant Responses to Wetland Drawdowns

Early Drawdowns (Mid-March – Late April)

Smartweeds (*Polygonum spp.*)
Sedges (*Cyperus spp.*)
Docks (*Rumex spp.*)
Rice Cutgrass (*Leersia oryzoides*)

Midseason Drawdowns (Early May – Late June)

Panicgrasses (*Panicum spp.*)
Millets (*Echinochloa spp.*)
Dallisgrasses (*Paspalum spp.*)

Late Drawdowns (After July 1)

Sprangletops (*Leptochloa spp.*)
Beggar Ticks (*Bidens spp.*)

regimes. Of course, this problem can be offset if the capability to irrigate exists.

Next, we need to consider the effects of drawdown rates. Occasionally, fast drawdowns are appropriate, especially in areas with brackish or saline waters.

In these cases, removing water quickly may minimize the level of soil salts remaining. However, by and large, a slow rate of water removal (minimum of 2-3 weeks) is recommended for maximum moist-soil plant response.

By optimizing the duration of our drawdown, we are prolonging the period of soil saturation, thereby affording the seeds in our seed bank a maximum amount of time to both germinate and develop an adequate root system. This, in turn, can ensure survival and, ultimately, result in substantially higher yields of seeds per acre in our moist-soil units.

Lastly, there is another notable advantage when using a prolonged drawdown rate. When water is discharged slowly from a unit, invertebrates become trapped in pools created by the retreating water, providing an important protein-rich food supply for waterfowl that haven't migrated north yet, as well as local pre-breeding and breeding female ducks, newly hatched waterfowl, and shorebirds. In short, it is a win-win!

So, as you can see, with some proper planning, implementation, and a little luck.....you can, at low cost, create attractive and productive wetland habitat that will be ready and waiting for the return of the ducks next fall.

When water is slowly drained from a wetland unit in mid-March to late April, beneficial plants like barnyardgrass germinate. (Inset photo courtesy of The Samuel Roberts Noble Foundation, Ardmore, Oklahoma.)

Wetland managers can encourage a combination of knotroot bristlegrass (foxtail) and sprangletops by slowly removing water from wetland units from May to June. (Inset photo courtesy of The Samuel Roberts Noble Foundation, Ardmore, Oklahoma.)

Sprangletops and millets germinate when water is slowly drained from wetland units after May. (Inset photo courtesy of The Samuel Roberts Noble Foundation, Ardmore, Oklahoma.)

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What's Inside

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