Fire on the Land: The Consequences
Part 2

The following is the second of a three part series about the role of fire as a natural and human agent on the land. The first article gave a historical perspective. This article will explain why and how fire is being reintroduced as a land management tool. The third will give the specifics of a prescribed burn.

Fire, either naturally set by lightning or by humans for different reasons, has always crossed the land. It was also explained in the first article that due to grazing practices and the absence of fire our landscape has changed drastically in the last 100 years from a grassland savanna with wooded draws and valleys. Today the land continues to change through a process called fragmentation, which is the division of land areas by such things as fences, roads, utilities, etc. Therefore today we have not only large tracts of land but a growing number of smaller tracts. In both cases land owners set goals for their land and apply management practices to reach those goals. Those goals and economics are major factors determining the management practices used.

What are some of the goals various land owners might have for their land? The ones that have been going on forever and continue today have to do with surviving off the land. For the hunter gatherers of the past it was just that, to use the land to provide water, food, and shelter. For ranchers the goals have always been to use the land to provide water and food for livestock, and then for wildlife as it has become an important source of income in the form of hunting. With the growing number of land owners and smaller tracts of land the goals may be changing because most of the newer land owners are not depending on the land for their total income. They may be operating eco-tourism type businesses, smaller hunting operations, hobby ranching, various recreational enterprises, or just surrounding themselves with land for peace and well being in retirement. The point is that every land owner most likely has goals for his or her land and to reach those goals each is applying various management practices. Otherwise, as was mentioned in the first article, a lack of management more than likely will lead to a solid cedar break or mesquite flat.

For larger land owners, especially ranchers who are still depending on the land to provide income to survive, the management practices they use are driven by economics. One of the practices for many of them is to remove the cedar and bring back grasses and better browse species for their livestock and wildlife. Remember from the first article that their past grazing practices and exclusion of fire had set into motion a radical change from grasslands to cedar breaks and an increase in many other brush species. Many of them tried to correct the situation by first using an ax, the chain saw, and then the dozer to mechanically remove the cedar. But with the loss of soil, and fire taken out of the picture it has been hard to reestablish those grasses needed for the livestock. Soil takes hundreds to thousands of years to form and even though many of our native grasses have adapted to shallow soils and less water they are also adapted to fire for regeneration and to the nutrients released from soil by fire. The mechanical processes mentioned for removing cedar and the newer chemical agents being used for both prickly pear and woody species, like mesquite are growing in cost, which can be very hard to recoup in today's markets. Yes, the smaller land owner who can afford to own property and not depend on it for income can more than likely also afford such management practices to remove cedar or other undesired species if that's their goal.

Thus for a growing number of ranchers and other large land owners the answer has been to return to nature's way and reintroduce fire as an effective and economic management tool to reach their goals. With the overall increase in smaller tracts due to fragmentation, there is no argument that

purposely setting fires today may have totally different consequences than when the Native Americans set them and let them sweep across thousands of acres at one time unchecked. Today when ranchers intentionally set fires on their lands they do so by following “guidelines that establish the conditions and manner under which fire will be applied on a specific area to accomplish specific management and ecological objectives.” Such fires are called **prescribed burns** with conditions being environmental ones, such as humidity, wind speed, air temperature, amount of fuel, type of fuel, soil moisture, and etc. The manner in which such fires are carried out begins years before the actual fire is set. Initially a burn plan, which will be detailed in the final article of this series, has to be developed and written. This plan would include the above mentioned conditions and the controls to be used, not only to get the desired results but foremost to make the fire just that, controlled, and not a wildfire endangering lives and property. During the early stages of planning the landowner must commit to such things as lower stocking rates to give the grasses or fuel load time to build up for a more effective burn which might take up to two years. Prior to the burn one must go to the expense of having a fire-lane, a bare strip of land 7-15 feet wide, dozed out around the perimeter of the area to be burned. More details of this process will be given in the final article.

At this stage one might ask if this is not taking an unnecessary risk to others’ property and lives for an individual landowner to reach his or her goals. First, the prescription itself is written and carried out to put the risk at the minimum. Second, drive around the hill country and notice how much land is covered by solid green in the winter time. That is partially the green of live oak, but mostly the green of cedar or Ashe juniper, an extremely flammable green fuel in winter and summer during dry times. In other words, that green represents thousands of acres of continuous fuel that once ignited can become a wildfire, which under the right conditions of humidity, temperature, and wind can sweep across the land out of control, as opposed to the prescribed manner in which prescribed fires are carried out. The recent devastating fires in the west and north Texas were mainly the result of heavy fuel loads and extreme weather conditions. Even the U. S. Forest Service has returned to fire not only to improve the conditions of our forest and range lands but also to help decrease the fuel loads that have built up over the years due to the diligence of suppressing fire. So, like the rancher, the public land managers have also come to realize that fire or lack thereof has more than one consequence.

Now should you, as a landowner, consider using fire to reach your goals? That would depend on your goals, the size of your property, and your economics. For landowners with larger tracts of land, say a few hundred acres or more, it might not only be good for encouraging grass species over brush species and a more economical tool, but also would be easier to contain and control by a proper prescription, than on smaller tracts. Therefore, it might not be as advantageous to use fire on smaller tracts because they are usually a part of developments with more fences, structures, and power lines, in close proximity, creating an unacceptable risk to property and lives. Along with the risk factor it might be more economical to use mechanical or other practices to reach your goals on a smaller tract.

The third and final article in this series will cover the specifics of caring out a prescribed burn.
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