



# Improving Grassland Habitat With Prescribed Burns



*The Pennsylvania Game Commission uses prescribed burns to improve grassland habitat on State Game Lands throughout Pennsylvania.*

## THE PROBLEM...

Over time, open habitats like meadows and grasslands will start to fill with small trees and shrubs and eventually become young forests. This process is known as succession. Since 70% of Pennsylvania is already forested, quality open habitats represent only a small proportion of the landscape. Certain species of wildlife rely on these open habitats for food, cover, and nesting opportunities. In order to halt succession and save open habitat, managers need to intervene.

Mowing has a short term impact on trees and shrubs since only the above ground portion of the plants are removed and they will grow back. Mowing also prevents desirable wildflowers and grasses from flowering and producing seeds which often leads to non-desirable plants taking over the fields. In addition, mowing has little effect on the buildup of dead vegetation, known as thatch, which can impede seed germination.

Implementing a properly timed prescribed burn can remove thatch, reduce non-desirable plants and kill small saplings and shrubs so that desirable wildflowers and grasses can prosper.



## WHAT TO EXPECT...

A prescribed burn, sometimes referred to as a controlled burn, is very different from a “wildfire.” With a prescribed burn, safety is the first consideration in the process, from the planning through the implementation. The entire operation is overseen by a “Burn Boss.” The process for a prescribed burn begins with a detailed plan written by local field staff, approved by the Pennsylvania Game Commission and reviewed by other state agencies. Only after this has been accomplished, can the agency move forward with the prescribed burn.



The timing of a burn is very weather dependent and takes into account the amount of moisture both in the ground and in the growing vegetation. The public will be able to find information on the exact burn window for all prescribed burns in the Southeast Region on the Game Commission website.



In anticipation of the burn, a fire break is established around the entire area for the purpose of serving as a barrier between the prescribed burn and the surrounding fields or forest. Prior to the burn, the fire break will be inspected to ensure there are no flammable materials such as leaves and dead grasses remaining.

During the day of the prescribed burn, access to the site will be restricted and only people directly associated with the burn will be allowed access at or near the site. Trained staff will be on hand with numerous pieces of fire equipment and water resources. All necessary local fire and emergency personnel will be notified in advance.



Prior to the start of the prescribed burn, a small, easily extinguished “test” burn will be conducted so that the Burn Boss can check the fire behavior and smoke dispersion patterns for the day. If the “test” fire burns within the pre-determined parameters, the prescribed burn will be allowed to continue. If it does not burn within those parameters, it will be called off for the day.

If the Burn Boss approves the prescribed burn to proceed, an experienced crew of Game Commission and other natural resource agency

personnel will use a regimented process to burn the site.

As the fire begins to burn out, there may still be small amounts of smoke present within the interior of the controlled burn area as some of the vegetative material burns out. This smoldering may last for a few minutes to hours after the area is burned. Flames will not be present though and there will be no danger to surrounding fields and forest. The area will be monitored over the next 24 hours.

### **BURN WINDOW...**

A safe and effective prescribed burn is very dependent on both site and weather conditions. An anticipated burn window is established between time periods when optimum site and weather conditions could be present. The public will be notified of the burn window status through the Game Commission website.

### **BURN OBJECTIVES...**

Specific objectives vary from field to field, but there are a few main reasons why fire is utilized to maintain these early successional habitats. A prescribed burn is used to kill non-desirable woody plants, as well as remove the dead vegetative build-up, known as thatch, from the surface to promote the germination of desirable plants. By varying the time of the year when an area is burned, the fire can also be used to promote regrowth of warm season grasses, cool season grasses and wildflowers.

Overall, a prescribed burn is used to reset the successional clock and maintain the field as an open habitat.

### **AFTER THE BURN...**

Although the area may look a little different for a short time, the long and short-term effects will definitely benefit wildlife, the field habitat and the users of State Game Lands.

The blackened soil of the burn will remain in that condition for a short time, but will come alive with plants germinating from seeds exposed by the fire.

Grasses and wildflowers with deep root systems begin to sprout very soon after a prescribed burn. Seeds not consumed during the fire will germinate.



Within the following growing season, the site should be green and teeming with new plants – many of them rare plants that depend on fire to germinate and grow!

### ADDITIONAL QUESTIONS...

While this brochure may have answered many of your questions, it may not have addressed them all. For more information about prescribed burns, please go to the Game Commission's website at: [www.pgc.pa.gov](http://www.pgc.pa.gov) and click on Prescribed Fire.

If you have any comments, ideas, questions or concerns regarding a burn in your area, please contact Dave Mitchell, SE Region Land Management Supervisor at 253 Snyder Road, Reading, PA 19605 or by calling (610) 926-3136, ext. 6607.



## PENNSYLVANIA GAME COMMISSION

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