



Improving Forest Habitat With Prescribed Fire

**Pennsylvania Game Commission
Southwest Region**

**SGL 267 Logan Twp. Blair Co.
Sasquatch Burn**

The Pennsylvania Game Commission is using prescribed fire to improve habitat on State Game Lands throughout the state. This brochure provides information about how and why prescribed fires are used and what to expect before, during and after a prescribed fire. The second part of this brochure contains information about the specific details for this burn.

THE PROBLEM...

The majority of State Game Lands are forested, with oak species being a major component. As an oak forest begins to age, the new oak seedlings are outcompeted by other tree species (such as birch, maple and tulip poplar). The overall impact to the forest is a decline in the number of oak seedlings growing into mature trees and a change in the species composition of the forest.

This decline in the number of oak seedlings is a problem because oak trees are extremely valuable to wildlife. Oak acorns have high nutritional value and are sought after as a fall food by a variety of birds and mammals as they prepare for the winter. While other trees may hold some value to wildlife, they don't compare to the benefits derived from oak.

Oak trees are very different from birch, maple and tulip poplar. Their bark is much thicker and their root systems are much deeper. Because of these fundamental differences, fire can be used to promote the growth of oak seedlings and reduce competition from other species. A very controlled, slow moving "prescribed fire" can be used to remove the black birch, red maple and tulip poplar seedlings from the forest understory. The fire will enable the oak seedlings, already present on the site, to sprout and grow without interference from surrounding vegetation. This will allow oak to remain the dominant species as this forest grows.

HOW DID WE GET HERE...

Throughout Pennsylvania's long history, oak trees have evolved with low intensity fires, a lot of them occurring naturally. Fires were intentionally set by native Americans for thousands of years to promote wild berries and improve game habitat. In the early part of the 20th century, public concern over wild fires led to the creation of the US Forest Service's *Smokey Bear* campaign in 1944. Since then, wildfires have been all but eliminated from the state. This has not had a completely positive result. Because of the reduction of fires, Pennsylvania forests have changed and resulted in the gradual transition away from a forest that was once dominated by oak trees to a forest now dominated by red



maple and black birch. In order to increase the number of oak trees on each site, the Game Commission attempts to mimic those earlier growing conditions by reintroducing fire, in a controlled manner, back into the forest ecosystem.

The Game Commission has been using prescribed fire as a habitat management tool for more than ten years, burning thousands of acres, from grasslands to forests.

Prescribed fires may be scheduled to occur from mid-March to early November depending on the weather and site conditions. All prescribed fires will be conducted and guided by all laws, standards and procedures of the *Prescribed Burn Practices Act*, as well as techniques learned from prescribed fires on other State Game Lands.

WHAT TO EXPECT...

The use of prescribed fire, sometimes referred to as a controlled burn, is very different from a "wild fire." With a prescribed fire, 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 fire begins with a detailed plan written by the Burn Boss, 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 fire.

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 fires in the Southwest Region on the Game Commission website.

In anticipation of the burn, an eight foot wide fire break is established around the entire area. Prior to the burn, all of the leaves and branches are removed from the fire break so that it will serve as a barrier between the prescribed fire and the surrounding forest.

During the day of the prescribed fire, 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 predetermined parameters, the prescribed fire 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 fire 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, remaining areas with flames will be extinguished. After the prescribed burn is finished, there may still be small amounts of smoke present within the interior of the prescribed fire area as some of the vegetative material burn out. Flames will not be present though and there will be no danger to surrounding forest. The area will be monitored over the next 24 hours.



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 forest habitat and the users of a Game Land. 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. Oak seedlings will begin to sprout very soon after a prescribed fire. Seeds produced from the overstory trees will germinate. Recent studies after State Game Lands fires also show reduction in ticks within the burned area. A prescribed fire of this intensity will not impact most of the over story trees. Most of the changes to the forest habitat will take place on the forest floor. Some species (red maple, black birch and tulip poplar) will be reduced from the site for a number of years. 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!



An 8-foot wide fire break is established around the entire parameter prior to the prescribed burn to serve as a barrier between the prescribed fire and the surrounding forest.

ADDITIONAL QUESTIONS...

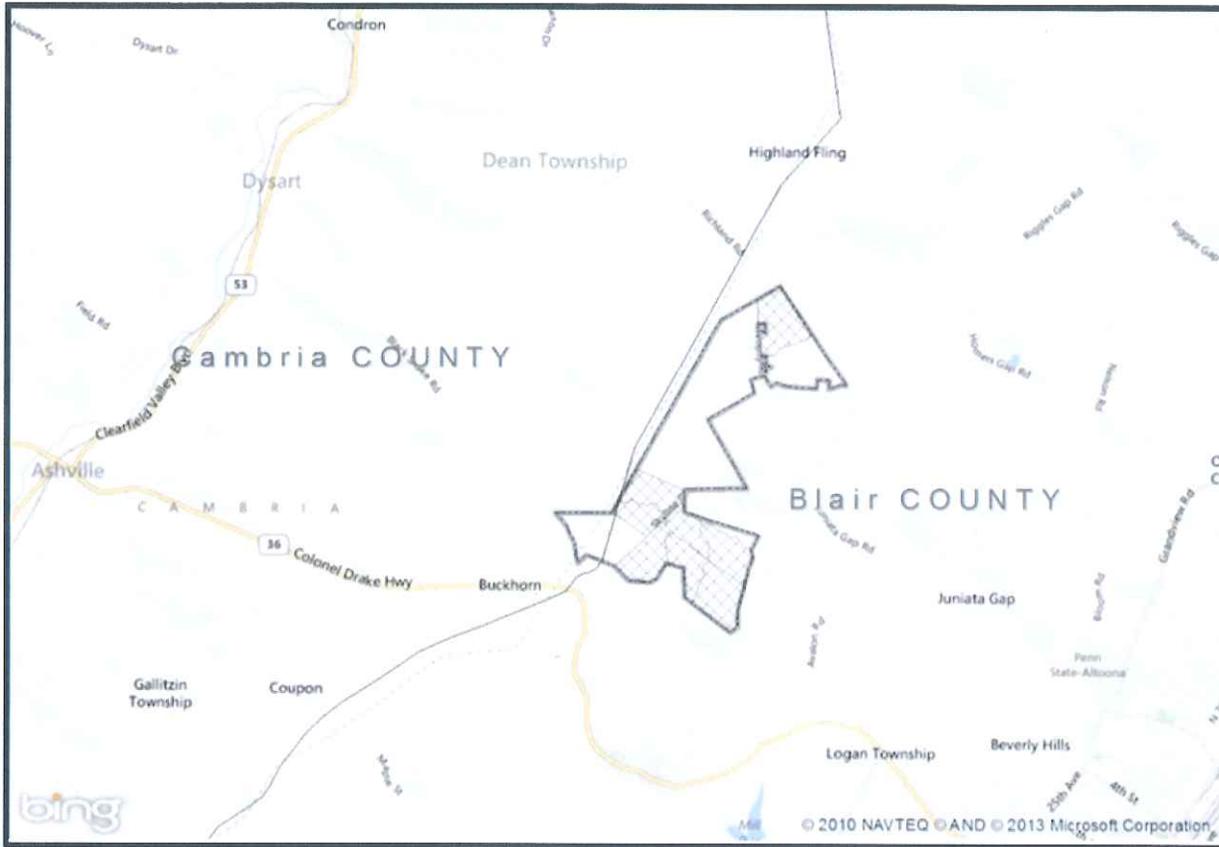
While this brochure may have answered many of your questions, it may not have addressed them all. For more information about a prescribed burn, please go to the Pennsylvania Prescribed Fire Council website at: www.paprescribedfire.org. For more information about wildlife and habitat management, please visit the Game Commission's website at: www.pgc.state.pa.us.



Oak seedlings and other desirable regeneration 1 year post burn State Game Lands 108 Cambria County.

SPECIFIC MANAGEMENT DETAILS...

Location: State Game Lands 267 – Blair County – Logan Township



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. As more exact weather and site conditions become known, the window for the burn is narrowed. At this point, the anticipated burn window is between August 27, 2013 and November 22, 2013.

Burn Objectives:

State Game Land 267, totaling 1,041 acres, is located in Blair County. It contains a wide variety of habitat types within its borders and is home to a multitude of different wildlife species. Approximately 929 acres of forest on SGL 267 was once scrub oak barrens habitat. The barren forest community of scrub oak-pitch pine in central Pennsylvania once covered more than 325,000 acres; today, far less supports scrub oak barrens habitat. Generally, these habitats are primarily restricted to the highest, most exposed portions of the ridge and are surrounded by slopes and drainages with mixed hardwood forests.

Scrub oaks produce surprising yields of acorns that are food for a variety of species, both game and non-game. Because barrens habitat are associated with periodic wildfire, habitat maintenance plans for SGL 267 include prescribed burns to preserve this habitat component.

A total of 449 acres is scheduled to be treated with a prescribed burn. The scrub oak dominated portion of SGL 267 is quite old, declining in vigor and is slowly being replaced with less desirable trees and shrubs like red maple, birch, sassafras, black gum and mountain laurel.