

Professional Land Managers Setting the Longleaf Pine Forest on Fire

(bolded words in text indicate key words and concepts)

Student Information:

Similar to how your doctor writes you a prescription to take care of a cold, land managers write a prescription to help heal the land. For the longleaf pine forest, fire is the common cure for illness. Fire is to the longleaf pine forest like rain is to rainforest or tides are to salt marshes. Take away fire and the longleaf pine forest will die.

Teacher Information:

Historically, the longleaf pine ecosystem was maintained by frequent, yet low intensity fires, which burned every 3 to 10 years. Fires started by lightning, Native Americans, and (more recently) Euro-American settlers molded a longleaf pine forest comprised of fire tolerant plant and animal species. In this condition, the longleaf forest is considered a **fire climax community**.

In the late 1800's and early 1900's, new land uses caused the forest to change. Logging, roads, and farm fields broke up the continuity of the natural forest which carried fire. By the mid-20th century people following the advice of **Smokey Bear** began to actively put out fires.

Over time, the forest industry would come to understand the importance of fire in maintaining the longleaf pine ecosystem. For it is not a question if the south's forests will burn but a question of when they will burn. Through fire suppression, frequency of fire was being substituted for intensity, i.e., frequent, low-intensity fires versus infrequent, **catastrophic wildfires**.

Today, fires set by managers (called **prescribed fires**) are used in the longleaf pine forest as a low cost way to benefit certain wildlife and plants, increase scenery, assist in **nutrient cycling**, and reduce the threat of large destructive wildfires in the future. However, these fire managers are not merely going out into the woods and dropping a match. A prescribed burn is so named because land managers first write a "prescription" of criteria that must be met before ANY burning can be done. The parameters of this prescription include weather, fuel types (e.g., live and dead vegetation) and amount, nearby manmade structures and topography. Land managers are systematically reintroducing fire into the landscape using carefully planned prescribed fires. Those individuals who do not follow this rigid protocol in using fire are called **arsonists**.

The silver hand held "drip-torches" contain a mixture of gasoline and diesel fuel. This mixture allows the burner to lay down a line of fire on the ground. The yellow shirts and green pants are standard issue Nomex (fire-retardant) clothing. Goggles safeguard eyes from flying ashes, plastic hard-hats protect the head from falling branches, and leather gloves and boots protect the hands and feet from heat. The small packs attached to the belt are heat resistant fire shelters. In the rare event that a person becomes trapped by flames, he/she would deploy their shelter climb inside and allow the fire to blow over the top of them. The bottom left of the drawing shows part of a "**fire break**". A fire break is a plowed line around the area being burned. Plowing removes grasses, trees (i.e., fuel) that would otherwise allow the fire to continue to burn. The direction of the smoke indicates that the wind is pushing the flames. When a fire moves with the wind it is called a headfire. A fire pushing against the wind moves slowly and is called a backfire.

Key Words and Concepts: arsonist, catastrophic wildfire, fire break, fire climax community, nutrient cycling, prescribed fire, Smokey Bear.