

Prairie Fire

Although climate influenced where prairies developed, it was not the only factor that determined what plant species would grow in an area. Grasslands throughout the world are found under three conditions: where there are dry seasons or short periods of dry weather during which the ground cover dries out; where the land surface is flat to rolling; and where periodic fires are present. Without the fires an area in grassland habitat may quickly develop into a forest.

Fires may be natural, such as those set by lightning, or may be started by humans. Native Americans used fire in hunting game animals. By surrounding the animals in a nearly complete fire circle, they would have no choice but to exit it through the one opening left for them. The Native Americans could then easily kill them. After the Native Americans were driven out of Illinois (1830s), the European pioneers continued the practice. Prairie fires were occasionally accidentally set, too.

Prairie fires moved with great speed, stopping only when they reached water. They were dangerous for those living and traveling on the prairies. These fires were actually maintaining the prairies, but the settlers did not like them. Settlers took steps to reduce the damage from fires. As the land was converted to agriculture the effects of the fires became less due to breaking the prairies into smaller fragments with no connections between them. With the lack of burning, some prairies reverted to forests.

Most of Illinois' original prairies no longer exist. There are some prairie remnants and many prairie restorations, however, that must be managed to maintain their prairie state. Prescribed burning is a management tool used on prairie sites. Fire is used for two purposes in prairie management: to suppress or kill those species that are not native to the prairie; and to reduce accumulated plant litter. Most trees and shrubs are vulnerable to the intense heat of fire, while most prairie plants become dormant in the fall and winter, with deep roots under ground from which the plant will grow the next year and only the dead leafy parts above the ground. Prescribed burning is usually conducted in the early spring or late fall. Prairie restorations are burned during the first spring following a planting and should be burned annually for five or six years. After that time, burning every two years is sufficient to maintain the prairie. Mature prairies are burned once every one to three years.

Although an excellent management tool, prescribed burning is potentially dangerous. Much planning must be done before the burn including, but not limited to, the following items: checking equipment for proper operation before using it at the burn site; preparing fire breaks to contain the burn; having an extra source of water for fire pumps; having plenty of manpower and tools; excluding people with respiratory or other medical conditions; making sure that clothing worn by participants is made of natural fibers, not synthetic materials (which burn easily); avoiding burning near highways and airports; providing two-way communication capabilities; only burning under proper weather conditions; obtaining an open burning permit, if required; coordinating with local officials to become aware of fire ordinances; having a weather radio; and keeping the keys in the ignition of all vehicles in case they need to be moved quickly by someone who isn't the regular driver.

Fire breaks of four to eight feet wide are constructed around the proposed burn area with a rake, disc or plow. Natural (streams or bluffs) and artificial (roads) fire breaks may also be used. Back fires, those that burn along the fire break into the prevailing wind, are set to increase the width of the fire break before setting the head fires, those burning with the prevailing wind. Head fires burn high and fast, while back fires burn slow and low. A small section of the prairie site is often reserved from the burn to act as a safe haven for insects, amphibians, reptiles and other organisms.