

LEGAL BARRIERS TO PRESCRIBED BURNING

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The reduction of naturally occurring fires has altered ecosystems worldwide. This alteration of natural fire regimes has had negative impacts on many areas. These include declines in fire-dependent species, the loss of resilience in fire-prone ecosystems, and a dramatic decline in important ecosystem services, such as surface water infiltration, soil nutrient cycling, and the availability of adequate wildlife habitat. In addition, plant communities that are adapted to specific fire regime's frequency, intensity, and seasonality are more susceptible to invasion by fire-sensitive species such as ashe juniper and eastern redcedar.

Recreations of historic fire regimes suggest that the fire return interval for a large portion of the southeastern United States (US) was from 2 to 10 years. Some areas in the Ozarks and Appalachian Mountains are thought to have had return intervals of 10 to 45 years (Fig. 1). Fire suppression, which has been the dominant rangeland management response in the southeastern US throughout most of the 20th century, has had many negative impacts on the region's ecosystems. For example, the change from frequent low-intensity fires to infrequent high-intensity fires in forests of East Texas and the southeastern US has caused many loblolly pine trees to be replaced by less-valuable forest species. This change results in lower forage productivity, decreased diversity of native species, and degraded habitat for grassland birds and mammals—many of which have become threatened or endangered.

Fuel accumulation is inevitable when fire is taken out of the range management scheme. The buildup of flammable plant tissues increases the likelihood of a wildfire that is much more intense than fires in areas where fuels are managed. This increased intensity causes fires that are difficult to control and more likely

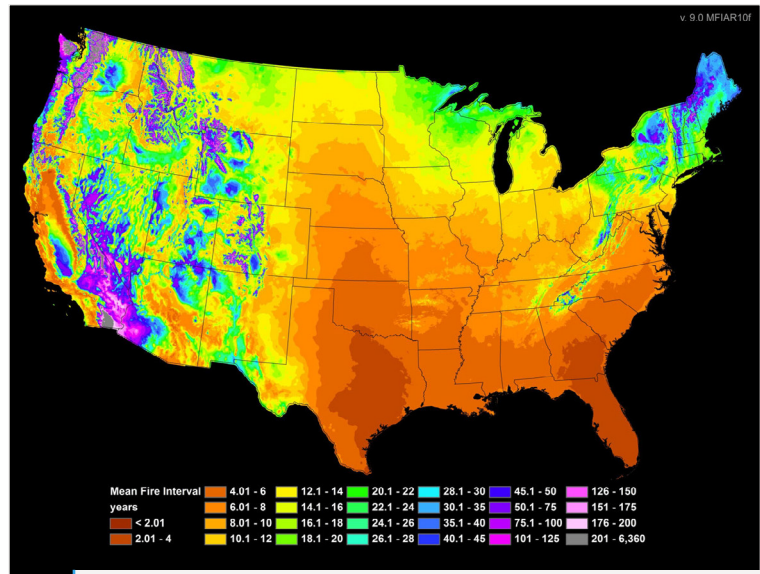


Figure 1. Historic (1650–1850) mean fire return interval estimates for fire in all or part of an average 1.2 km² area. *Graphic courtesy of Guyette et al., 2012*

to destroy property and injure people. In addition, severe fires in systems that are adapted to frequent low-intensity fires can alter the structure and composition of existing plant communities. These changes often reduce overall plant community resilience, which, in turn, decreases ecosystem function. In extreme cases, wildfires resulting from fuel accumulation can increase rangeland degradation and soil erosion as well as injury, loss of life and property, and enormous fire control expenditures.

So, what options exist to combat the problems that fire suppression has created? Prescribed burning can mimic historical fire regimes under specific circumstances. It is a cost-effective tool for managing and restoring ranges and forests. Prescribed burning can manage vegetation using a natural process that is integral to native plant communities. Unfortunately, the liability and risks associated with the practice keep prescribed burning from being used extensively. For many landowners, potential lawsuit and litigation costs are important considerations when deciding whether to use fire as an ecosystem management tool.

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PRESCRIBED FIRE LIABILITY

Generally, civil liability standards in the US for prescribed burning fall into three distinct categories (Fig. 2):

Strict liability

- ▶ Holds a burner liable for any property damage caused by an escaped prescribed burn or spot fire from the prescribed burn regardless of the action taken by the burner to prevent fire escape
- ▶ This is the highest level of liability for anyone using prescribed burning
- ▶ Only 5 states have standards that suggest strict liability, although the statutes do not all explicitly state that strict liability is the standard

Simple negligence

- ▶ Requires the burner to practice reasonable care during a prescribed burn
- ▶ This is the most common liability standard for prescribed burning; Texas and 42 other states follow simple negligence standards
- ▶ Requires the plaintiff to show the burner acted negligently in order for the burner to be liable for damage caused by a prescribed burn that escapes or is the source of a spot fire
- ▶ In Texas, this standard is stated explicitly under Texas Natural Resource Code § 153.081; in many states, such as in New Mexico, this standard is established through case law

Gross negligence

- ▶ If a certified prescribed burner follows codified regulations regarding prescribed burning, a plaintiff must demonstrate the burner showed reckless disregard of the duty of care owed to others
- ▶ In states with gross negligence standards, simple negligence typically will apply if regulatory requirements are not fulfilled
- ▶ Statutes identifying gross negligence liability standards have been enacted in Florida, Georgia, Michigan, and Nevada
- ▶ Gross negligence statutes are also an incentive to follow their requirements and receive prescribed burn training—better trained burners lower the risk of an escape and the cost for the burner and adjacent property owners
- ▶ Gross negligence incentivizes creating defensible space and fire-wise construction since the burden of liability is shifted from the burner onto neighbors under a gross negligence standard (this type of fire safety response can also help reduce the spread of wildfire)

In some states, legislators have revised state liability laws to counter concerns of liability by private landowners and to promote the use of prescribed burning to manage fuel loads which mitigates wildfire. For example, in 1990, Florida passed the Prescribed Burning Act, which is nationally recognized as landmark legislation that protects a landowner's right to use fire as a management tool. Under this act, a landowner or burner gains the right to burn. As a result, the burner could not be held civilly liable for damages unless simple negligence in using prescribed fire was found. Following the devastating 1998 wildfire season, the Florida legislature modified its Prescribed Burning Act such that a burner cannot be found civilly liable unless a court finds that the burner exhibited gross negligence. Following Florida's example, other states have changed their laws such that the landowner's right to use prescribed burning is explicit. In addition, new prescribed burning laws clearly state the applicable liability standard, and in some states, lessen the liability burden on landowners using prescribed burning. Although these statutory reforms appear positive for prescribed burning, it is unclear that they are achieving their intended purpose of providing adequate incentive for landowners to manage more acres with prescribed burning.

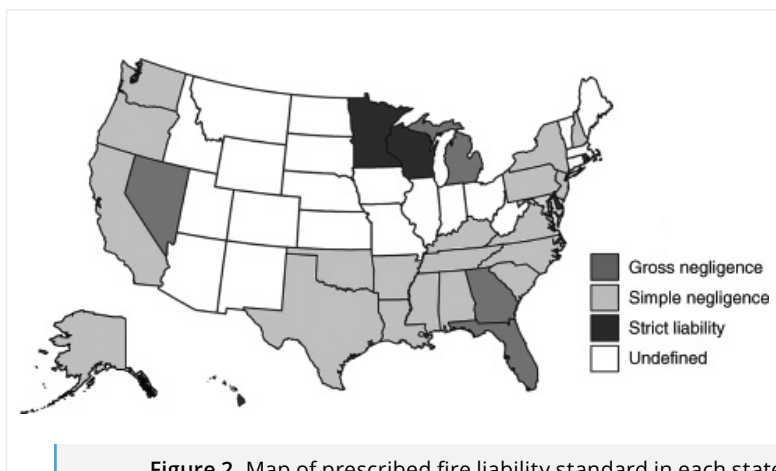


Figure 2. Map of prescribed fire liability standard in each state. Medium-gray states prescribe a gross negligence standard, light-gray states prescribe simple negligence for burners, dark-gray states have case law or statutory language supporting strict liability for escaped prescribed fires, and white states have a liability standard that is undefined statutorily and usually follow simple negligence rules as established by case law. *Used with permission from John Wiley and Sons*

EXAMPLES OF STATUTE REFORM FOR PRESCRIBED BURNING

- ▶ Florida statutes list requirements that should be met to by burners, including a written burn plan and that a Certified Prescribed Burn Manager (CPBM) to be on site during the actual burn, as well as having an adequate crew, equipment, and firebreaks
- ▶ Florida changed their liability standard from simple to gross negligence if all requirements are met; however, if regulatory requirements are not met, simple negligence applies
- ▶ Georgia followed Florida's example, but does not require an onsite CPBM, adequate crew, equipment, etc., and only requires the burner to obtain a permit from the Division of Forestry before conducting a prescribed burn
- ▶ Alabama, South Carolina, and North Carolina passed right-to-burn laws which require a CPBM and written burn plan, but each maintained simple negligence standards
- ▶ County or state officials can establish burn bans in most states during dangerous fire weather, but many states' statutes, including Alabama, North Carolina, Georgia, and Texas, provide exemptions for CPBMs during burn bans; Georgia extends its exemption to all landowners (even uncertified) burning for pasture and field management

HAVE REFORMS TO LIABILITY LAWS RESULTED IN MORE ACRES BEING BURNED?

From 2008 to 2013, fewer acres were treated with prescribed burning, and the annual number of fires was lower in simple negligence states than in gross negligence states (Fig. 3). States with gross negligence liability standards burned 7,100 more acres per county per year than states with simple negligence standards. Interestingly, states requiring a written burn plan, a CPBM on site, and adequate equipment, personnel, and firebreaks burned the same number of acres and had similar annual numbers of fires as states that only required filing a permit. Instead of discouraging landowners from using prescribed burns because the additional requirements seem onerous, they may encourage burning by showing burners did not act negligently in the case of an escape. In addition, the increased training and safety awareness that come with those requirements result in better prepared burners. This preparation and lower liability standards incentivize the use of prescribed burns.

THE IMPORTANCE OF PRESCRIBED BURN ASSOCIATIONS

Prescribed burn associations (PBAs) are critical to the effective use of prescribed burning. These associations provide a non-legislative mechanism for limiting liability for prescribed burning by private landowners. PBAs are landowner cooperatives whose goal is to use prescribed burning to manage vegetation on private lands—they are established to share the cost of burning. Typically, each association consists of several county or multi-county chapters that share labor and equipment, facilitate knowledge sharing and training opportunities, and spread the costs of liability insurance across their members. In Oklahoma and Texas, PBAs have driven

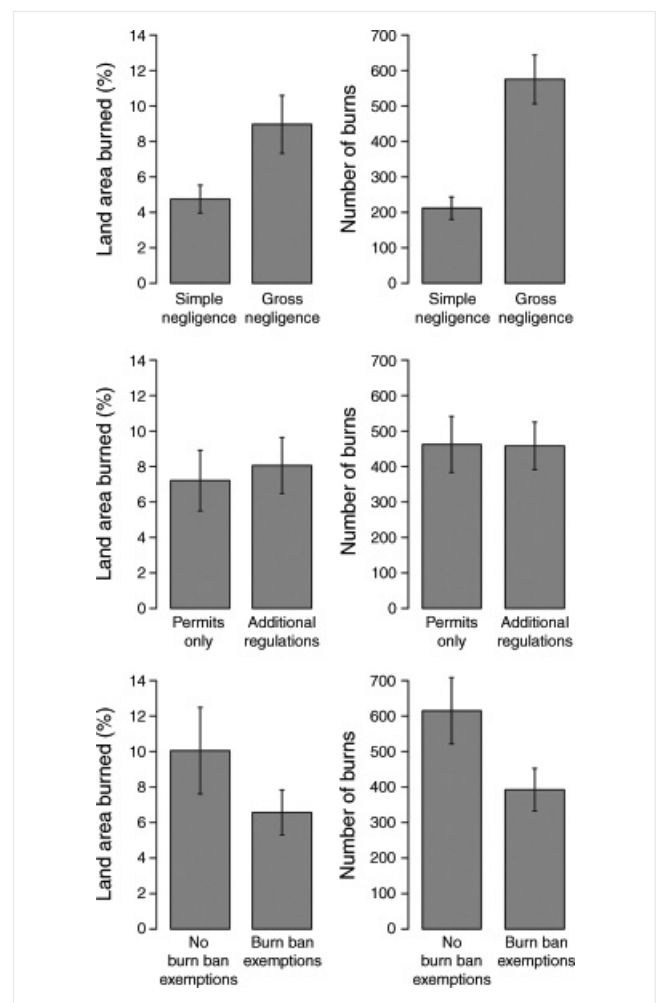


Figure 3. Average annual percentage of land area burned and average annual number of burns between contiguous counties with simple negligence and gross negligence (top row), permit requirements only and additional requirements (middle row), and burn ban exemptions for certified prescribed burn managers (CPBMs) or land management (bottom row). Used with permission from John Wiley and Sons

legislation that allows CPBMs to burn during burn bans to meet management objectives that depend on intense fires. PBAs hold regular business meetings, elect officers, and provide hands-on training to members who want to learn more about prescribed burning. The Prescribed Burn Alliance of Texas serves as a portal for the state's 10 PBAs. It provides information and resources on concepts and application of prescribed fire management.

The Coalition of Prescribed Fire Councils is a national body that seeks to enhance public safety, resource management, and environmental quality through appropriate prescribed burning. The Coalition represents 12 million acres of annual prescribed fire use and serves as a forum for addressing issues of national concern. Its work facilitates communication among those interested in prescribed burning and creates opportunities for prescribed fire collaboration. Currently, 31 states are members of the Coalition of Prescribed Fire Councils.

The Great Plains Fire Science Exchange (GPFSE) also promotes PBAs by assisting land managers and the prescribed burn community with sound decision-making based on the most current scientific research. The GPFSE is supported by the Joint Fire Science Program to strengthen collaboration among prescribed burn managers. It also makes fire science information more readily available to policy makers. Issues of woody plant encroachment, smoke management, prescribed fire techniques, volatile fuel mitigation, and ecosystem health are all issues that the GPFSE works on regularly with PBAs.

KEY CONCEPTS

- ▶ Fire is a necessary component for numerous ecosystems throughout Texas and the southeast. Strict regulations and liability concerns provide disincentives for prescribed burning and have cascading negative effects by discouraging the reintroduction of fire into fire-dependent systems.
- ▶ In states that have adopted gross negligence liability standards, landowners are more likely to use fire as a management tool and burn a greater proportion of private land than landowners in states with simple negligence liability standards.

- ▶ Regulatory requirements—burn permits, written burn plans, adequate crew, adequate firebreaks and equipment, and CPBMs on site—do not inhibit the incidence of prescribed burning.
- ▶ Regulatory requirements along with lower liability standards make prescribed fire more viable for landowners and managers and provide some safety assurances for neighbors.
- ▶ In states with gross negligence standards there is no additional damage or increased suppression cost due to escapes or spot fires from prescribed burns.
- ▶ Prescribed burn associations provide fire safety training, shared labor, equipment, and (in some cases) liability insurance; they are organizations that effectively help private landowners use prescribed burning.

Additional information on prescribed burning

Great Plains Fire Science Exchange

- ▶ <http://www.gpfirescience.org/>

Prescribed Burn Alliance of Texas

- ▶ <http://www.pbatexas.org/>

Coalition of Prescribed Fire Councils

- ▶ <http://www.prescribedfire.net/>

Oklahoma Prescribed Burn Association

- ▶ <https://www.ok-pba.org>

The Samuel Roberts Noble Foundation

- ▶ <http://www.noble.org/fire/>

Texas A&M AgriLife Extension Service

- ▶ <https://www.agrilife.tamu.edu>

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