



The Value of Forming a Prescribed Burn Association

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Introduction

Prescribed burning is the application of fire to the landscape to meet multiple land management objectives.¹ It is one land management practice that can be used to restore the natural balance of ecosystems in a safe and calculated way, while also reducing wildfire risk. While most plant communities in the South are dependent on fire to maintain plants and native wildlife, many lands do not receive as much fire as they need.

In the South, the majority of forest land is privately owned. This means that the ability to manage fire-dependent and fire-adapted ecosystems is contingent upon the private landowner's capacity to use prescribed fire on their lands. Many landowners already use prescribed fire for accomplishing their management goals, but most do not. To some, burning is viewed as a risky and daunting task, which hinders their willingness to utilize prescribed fire. However, evidence shows that with the help of neighbors and other landowners, prescribed burning is easier, safer, and more economical than when trying to burn on one's own.^{2, 3, 4}

The development of Prescribed Burn Associations (PBAs) is becoming an increasingly popular approach to increase private landowner's ability to utilize prescribed fire.

What Is a Prescribed Burn Association?

A PBA is a group of local landowners and other concerned citizens that form a partnership to conduct prescribed burns.³ PBAs have successfully increased prescribed fire use by landowners and land managers, mainly by making it easier and safer to use prescribed fire.⁴ The goal of a PBA is to promote the safe and responsible use of fire in the region through increasing landowner access to education, training, technical support, funding, equipment for burning, and hands-on experience to achieve multiple management objectives.³ Each PBA is operated by private landowners and other local volunteers.³ Examples of PBA-led activities can include conducting training and workshop events, working to improve prescribed burn laws, tracking prescribed burn activity in the region, and purchasing burn equipment for use by PBA members.³

PBAs can be formed at various levels, such as local, county, or multi-county, depending on the need. A state-level PBA, such



Members of the Roger Mills County PBA in western Oklahoma get ready for a prescribed burn. Photo: John Weir.

as the Prescribed Burn Alliance of Texas (www.pbatexas.org) or Oklahoma Prescribed Burn Association (www.ok-pba.org), can also be formed to support existing local, county, or multi-county PBAs and to help develop new PBAs within the state. These larger-scale PBAs can assist local organizations by providing additional resources, promoting the establishment of local PBAs, and advocating in state legislatures and regulatory agencies. Such state-level fire coalitions and prescribed fire councils were a driving force in passing "Right-to-Burn Acts" that established prescribed burning as essential to maintaining and restoring ecological integrity.⁵

In 2015, there were 62 known PBAs in eight states, along with two statewide burn associations (Oklahoma and Texas) and one regional alliance.⁴ This represents an increase from the 50 PBAs that were in existence as of 2012. In 2016, a new PBA was developed in North Carolina (North Carolina Sandhills Prescribed Burn Association) increasing the current figure to 63.⁶

For more information and an interactive map of existing PBAs, please visit www.gpfirescience.org/fire-organizations-agencies.



Members of the North Carolina Sandhills PBA shared resources and equipment to conduct a prescribed burn on a landowner's property. Photo: Brady Beck Photography.

Barriers to Burning and How PBAs Can Help

According to surveys, landowners have listed several reasons they do not burn.^{7, 8, 9} These surveys identified the following major barriers, which are described in more detail below:

- Liability concerns
- Lack of capacity
- Lack of training and/or experience
- Resource concerns (including limited access to equipment)
- Weather (including narrow burn windows and limited burn days)

Prescribed Burn Associations can help members to

- Obtain insurance and effectively manage risk by addressing the other needs,
- Increase available peer support to burn,
- Gain experience through assisting with burns,
- Take advantage of narrow burn windows by deploying quickly and having multiple groups burning at once, and
- Pool equipment to increase resource availability.

Liability

The fear of liability is arguably the most significant concern related to prescribed burning among landowners. By increasing capacity, experience, and equipment through a PBA, liability risk will subsequently be reduced. Planning burns with multiple landowners, where neighbors assist one another, reduces liability as well because if a landowner burns only their property, the biggest concern is keeping the fire on their property. If multiple landowners plan their burns together, they allow fire to pass freely from one property to another without the worry or fear of liability. This also can make burning more economical due to using natural or man-made firebreaks that may exist on a neighboring property, along

with burning larger blocks at once, thus reducing costs, time, and number of burn days needed.

PBAs exhibit relative success in mitigating issues of liability in relation to the occurrence of spotfires (a fire started by flying sparks or embers at a distance from the main fire) and escaped burns. A study by Weir et al. found that spotfires occurred on prescribed burns conducted by PBAs at the identical rate (1 of 5 burns) relative to experienced crews within the same region.⁴ They also found that only 1.5% of a total of 1,094 fires conducted by PBAs escaped, with no reported insurance claims against any of the PBAs or members. This demonstrates that PBAs can manage spotfires and mitigate the potential for escaped burns.

Also, in some cases, PBAs can provide prescribed fire liability insurance at an affordable rate to landowners through a group discount. Potential damages caused by escaped fires, suppression costs, injury to people assisting with the burn, or problems caused by smoke are usually covered with insurance. A minimal annual fee and additional charge may incur for each burn the landowner would like to have insured.

Capacity

A significant challenge for prescribed fire implementation both at a national and regional level is lack of capacity. Research shows that there is a lack of trained prescribed fire managers, training opportunities, private contractors, and partnerships that has resulted in a major bottleneck for the appropriate application of prescribed fire.¹⁰ PBAs provide a successful method for building prescribed fire capacity through the development of a collaborative network of landowners, government agencies, conservation groups, and other interested individuals and organizations that come together with the common goals of expanding the use of prescribed fire in a specific geographic region.

Training and Experience

Knowledgeable landowners who are well equipped with an informed crew are less concerned about liability because they know how to effectively plan and manage prescribed fire.¹¹ Successful PBAs can also assist in confronting negative local attitudes and reactions to burning. For example, one Texas PBA was able to successfully rebut accusations of property damage and received an apology in the local paper from the accuser.⁵ Weir et al. surveyed 50 PBAs located in five Great Plains states about their formation, burn history, fire planning, member experience, external assistance, and other information.⁴ The majority of respondents reported that their members had a mix of training or experience prior to joining the PBA, with 75% reporting that some members did not have prior training or experience and 88% reporting that some members did have prior training or experience. This shows that PBAs provide an opportunity for peer-to-peer learning as both experienced and non-experienced burners can work side-by-side to gain valuable experience in the implementation of prescribed fire.

Resources

In the same survey of PBAs, members indicated that drip torches, radios, slip-on pump units and ATV sprayers, ATVs, weather instruments/kits, utility vehicles, flappers/swatters and fire rakes were commonly used on burns.⁴ Gloves, flame retardant shirts and pants, and goggles/safety glasses were reported as the personal protective equipment most frequently worn on burns. Members identify the value of pooling their equipment so no one person has to buy all of the equipment needed to burn. Some PBAs partner with their local fire department to rent or use equipment for conducting burns, as well as having the local fire department present with additional manpower and equipment for burns.³

In addition to equipment, PBAs can receive funding through grants or donations. The aforementioned survey found that all responding PBAs received funding in the form of private donations, nongovernmental organization grants and donations, along with state and federal grants ranging from \$500 to \$250,000.⁴ The funds have been used for needs such as equipment and training activities.

Weather

Narrowing burn windows as a result of weather or limiting burning to a single season of the year also presents a very significant challenge when coupled with the aforementioned impediments related to capacity. Experience has shown that PBAs are more efficient in accomplishing prescribed burns than landowners burning on their own because they can organize the required labor and support quickly within the often narrow window of desired weather conditions.⁴ Also several PBAs have enough members and equipment available to conduct multiple burns in a single day.

Summary

The total value of forming a PBA is not only realized by one individual, but by many. The services resulting from an active PBA benefit neighbors, as well as the community through healthy forests and rangelands, reduced wildfire impacts, and the multitude of other benefits that prescribed burning provides. A video, produced by the North Carolina Sandhills Prescribed Burn Association, depicts the value of this PBA to its members: <https://youtu.be/HaHt6ZLYd3o>. More information about forming a PBA is available at <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2819/F-2880web.pdf>.

References

1. Waldrop, T. A., & Goodrick, S. L. (2012). *Introduction to prescribed fires in Southern ecosystems* (Science Update SRS-054). Asheville, NC: U.S. Department of Agriculture Forest Service, Southern Research Station. 80p.
2. Weir, J. R. (2010). Prescribed burning associations: Landowners effectively applying fire to the land. In K. M. Robertson, K. E. M. Galley, & R. E. Masters (Eds.), *Proceedings of the 24th Tall Timbers fire ecology conference, The future of prescribed fire: Public awareness, health, and safety* (pp. 44–46). Tallahassee, FL: Tall Timbers Research Station.
3. Weir, J. R., Stevens, R. L., & Bidwell, T. G. (2010). *Prescribed fire associations* (Oklahoma State University Cooperative Extension Service Publication NREM-2880, revised November 2015). Retrieved from: <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2819/F-2880web.pdf>
4. Weir, J. R., Twidwell, D., & C. L. Wonkka. (2015). *Prescribed burn association activity, needs, and safety record: A survey of the Great Plains* (Great Plains Fire Science Exchange Publication 2015-6). Retrieved from: <https://static1.squarespace.com/static/55687b65e4b0bd1f0f6f4548/t/55d61160e4b0b9bb407f5047/1440092512828/PBASurveyWeiretal2015-6rev.pdf>
5. Weir, J. R., Twidwell, D., & Wonkka, C. L. (2016). From grass-roots to national alliance: The emerging trajectory for landowner prescribed burn associations. *Rangelands*, 38(3): 113–119.
6. Wimberley, J., & Wagner S., (2016). Kickoff meeting of the NC Sandhills Prescribed Burn Association. *Longleaf Leader Magazine*, 16–17. Retrieved from: <https://serppas.org/media/1978/2016-04longleafleaderpbaarticle.pdf>
7. Association of Fish and Wildlife Agencies, Forestry Work Group. (2015). *Survey: Prescribed burning on private lands*. (Unpublished report).
8. Kobziar, L. N., Godwin, D., Taylor, L., & Watts, A. C. (2015). Perspectives on trends, effectiveness, and impediments to prescribed burning in the southern U.S. *Forests*, 6, 561–580.
9. Wallace, P., & Livingston, K. (2014). *Prescribed fire use survey for landowners in North Carolina*. (Unpublished report).
10. Melvin, M. A. (2015). *2015 national prescribed fire use survey report*. Retrieved from: www.stateforesters.org/sites/default/files/publication-documents/2015%20Prescribed%20Fire%20Use%20Survey%20Report.pdf
11. Stevens, R. (2013). *Association represents prescribed burn practitioners*. Ag News and Views. The Noble Foundation. Retrieved from: www.noble.org/ag/wildlife/burn-practitioners

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