

# March Update from the Field

Hi everyone!

The March Update from the Field corresponds with our current seasonal campaign of conducting open burns safely. Whether you are burning brush, trash, or conducting a prescribed burn; your safety is the number one priority. The following link to a DNR website provides information about the environmental and health impacts of open burning. <https://dnr.wi.gov/topic/OpenBurning/Impacts.html>. If you'd like more information or the complete article on any of these topics, please email me.

Best regards,

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## **Determinants of perceived risk and liability concerns associated with prescribed burning in the United States (2019)**

Joshi, O., Poudyal, N., Weir, J., Fuhlendorf, S., & Ochuodho, T. *Journal of Environmental Management*, 230, 379-385. DOI: <https://doi-org.proxy.lib.uiowa.edu/10.1016/j.jenvman.2018.09.089>

While prescribed burning is a proven tool in the management of forests and grasslands, its use has been limited due, in part, to potential risks that may result in legal liability, property damage, and personal injury. The purpose of this study is to understand the factors that shape landowners' and fire professionals' perceptions of risks associated with prescribed burning activities. The data for this study were collected from active prescribed fire professionals involved in Prescribed Burn Association (PBA) activities in 14 Southern and Mid-western states. Perceived risk was higher among respondents with higher levels of concern related to safety and weather but lower among respondents with more experience in burning activities. Sociodemographic variables such as age and income were not significantly correlated with risk perception. These findings are useful for better understanding how landowners and fire professionals perceive risk and offer insight into how perceived risk affects decisions to apply prescribed burns.

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## **First Approximations of Prescribed Fire Risks Relative to Other Management Techniques Used on Private Lands (2015)**

Twidwell, D., Wonkka, C., Sindelar, M., & Weir, J. *PloS ONE*. 10(10):e0140410. DOI: <http://dx.doi.org.proxy.lib.uiowa.edu/10.1371/journal.pone.0140410>

Fire is widely recognized as a critical ecological and evolutionary driver that needs to be at the forefront of land management actions if conservation targets are to be met. However, the prevailing view is that prescribed fire is riskier than other land management techniques. Perceived risks associated with the application of fire limits its use and reduces agency support

for prescribed burning in the private sector. As a result, considerably less cost-share support is given for prescribed fire compared to mechanical techniques. This study tests the general perception that fire is a riskier technique relative to other land management options. Due to the lack of data available to directly test this notion, we use a combination of approaches including 1) a comparison of fatalities resulting from different occupations that are proxies for techniques employed in land management, 2) a comparison of fatalities resulting from wildland fire versus prescribed fire, and 3) an exploration of causal factors responsible for wildland fire-related fatalities. This approach establishes a first approximation of the relative risk of fatality to private citizens using prescribed fire compared to other management techniques that are readily used in ecosystem management. Our data do not support using risks of landowner fatalities as justification for the use of alternative land management techniques, such as mechanical (machine-related) equipment, over prescribed fire. Vehicles and heavy machinery are consistently leading reasons for fatalities within occupations selected as proxies for management techniques employed by ranchers and agricultural producers, and also constitute a large proportion of fatalities among firefighters. Our study provides the foundation for agencies to establish data-driven decisions regarding the degree of support they provide for prescribed burning on private lands.

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#### **A prospective analysis of trash, brush, and grass burning behaviors. (2008)**

Wibbenmeyer, L. A., Kealey, G. P., Young, T. L., Newell, I. M., Lewis, R. W., Miller, B. R., & Peek-Asa, C. *Journal of Burn Care & Research*, 29(3), 441-445. DOI: 10.1097/BCR.0b013e3181710835

Burn injuries sustained during residential trash, brush, and grass burning cause significant morbidity and mortality in rural areas. To further prevention efforts, we surveyed individuals who incurred injuries from residential burning. Thirty-six individuals injured while burning trash, brush, or grass from June 2003 through September 2005 were asked to respond to a self-administered written survey. Injury related questions revealed that the majority of those injured were burning brush (21 of 35, 60.0%) in an open space (19 of 35, 54.2%) with the addition of accelerants (27 of 36, 75%). Survey questions regarding usual burning practices revealed almost two-thirds burned either brush or a mixture of brush and trash (23 of 36, 63.9%). Eighty percent of those who were injured desired to change their behavior (25 of 35, 80%). Approximately two-thirds would consider asking for help with burning if it were provided (22 of 34, 64.7%). Our survey shows that acceptable alternatives to burning varied depending on the material that was burned. As the majority of respondents usually burned brush or a mixture of brush and trash, an acceptable trash removal system should also include brush pickup. As residential burning continues presently, injury prevention efforts are essential and should focus on the misuse of gasoline, uniform safety standards for gasoline cans, and dissemination of safe burning practices.