



# Environmental Science Graduate Program Seminar Series

## The Effects of Wildland Fires on Health and Risk Communication

**Margaux Joe**

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**Smith Laboratory, Room 3150**



### Abstract

It is indisputable that climate change has had a drastic effect on our weather systems causing more extreme heat and more frequent fire weather. Climate change, in conjunction with previous conservation practices, has led to a wildfire season that is now 70 days longer than in the 1970s. In addition, the wildland fire acreage is expected to double what it is currently by 2050. In an effort to reduce the severity and probability of large-scale wildfires, prescribed burns are now being used more frequently across the United States. Although this may be an effective land management tool to reduce the severity and length of the current wildfire season, there are issues that arise with risk communication and risk management in terms of the health of surrounding communities and wildland firefighters. This multi-phase study aims to evaluate and improve the communication and outreach tools used to inform communities that surround prescribed burns. Further, while there is increasing evidence that exposure to wildfire smoke induces acute respiratory effects, there is limited evidence on its cardiovascular effects. Therefore, this study also aims to assess the effects of wildfire smoke on adverse cardiovascular effects as indicated by lipid dysregulation and changes in vascular structure and function.