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Agricultural and Forest Meteorology

To the editorial board,

Thank you for considering our manuscript "Fuel constraints not fire weather conditions limits fire behavior in reburned boreal forests" for publication as part of the **Advances in wildland fire-vegetation-atmosphere interactions** special issue in *Agricultural and Forest Meteorology.* We believe that our research makes a valuable contribution to the field of agricultural and forest meteorology due to its novelty and significant relevance in understanding the dynamics of wildfires in boreal ecosystems under changing climate conditions.

Our study investigates the effects of reburning on fuel abundance, connectivity, and fire behavior in boreal forests of Interior Alaska, an area undergoing substantial ecological transformation due to climate change. It is well-established that warming temperatures, prolonged fire seasons, increased lightning, and drier conditions are driving a surge in reburning events in this region. However, the impact of these factors on fire behavior in emerging deciduous regeneration remains poorly understood.

Our study explores how reburning alters fuel abundance and connectivity, emphasizing the critical role of fuel in fire behavior, which is vital for both forest management and wildfire prediction. We focus on the consequences of repeated reburning, a phenomenon of growing concern in boreal forests, and how it shapes fuel characteristics and fire behavior. We employ the Wildland-Urban Interface Fire Dynamics Simulator (WFDS) to model fire behavior under different scenarios, providing a timely exploration of potential fire spread in reburned landscapes.

Thank you for considering our submission.

On behalf of myself and my co-authors,

Katherine Hayes
Corresponding author