Statement of Dr. Morgan Varner
Senate Committee on the Budget
Wednesday, March 8, 2023

Hearing on "A Burning Issue: The Economic Costs of Wildfires"

Thank you, Chairman Whitehouse, Ranking Member Grassley, and Members of the Committee, for inviting me to share how Tall Timbers is working to reduce the economic toll of extreme wildfire.

My name is Morgan Varner and I am the Director of Research and a Senior Scientist at Tall Timbers. For those who are not familiar, Tall Timbers is a leading non-governmental organization with over 60-years of experience using prescribed fire science to solve land management problems. In this role, I work with organizations and governments across the country to better understand fire behavior and predictions of fire effects on plants and animals. This includes serving on California's *Wildfire & Forest Resilience Task Force, the U.S. Forest Service National Prescribed Fire Review* in response to the US Forest Service Chief's 90 day pause on prescribed burning, and past leadership of the *Coalition of Prescribed Fire Councils*. As a scientist I have published more than 130 peer-reviewed articles and serve on editorial boards of the premier international journals in wildland fire science. Prior to working at Tall Timbers, I was a professor in forestry for 12 years at Cal Poly Humboldt, Mississippi State University, and Virginia Tech where I taught fire science and forest management courses. From 2016-2019 I served as Team Leader and Research Biological Scientist at the USDA Pacific Wildland Fire Sciences Lab in Seattle. I earned a Ph.D. in Interdisciplinary Ecology from the University of Florida, an M.S. in Forestry from Auburn University, and a B.S. from the University of Idaho.

Tall Timbers was established as a field research station to study the impacts of fire on plants and animal populations. Our primary research focus is the ecology and management of fire-dependent ecosystems, and its wildlife, including bobwhite quail, in the Southeastern Coastal Plain. Our conservation efforts are dedicated to helping protect the distinctive, rural landscape of South Georgia and North Florida and its traditional land uses. Our education program transfers research and conservation information for resource management. We have shared these findings with organizations, academic institutions and governments around the world. Through our collective research, we know that prescribed fire is an essential land management tool, whether to reduce the threat and impacts of wildfires, to maintain robust rural working lands, or to restore and promote biodiversity.

The increasing intensity and frequency of wildfires across the United States is alarming and clearly a national crisis. Since 2005, wildfires have burned over 10 million acres per year in the United States three times and this alarming number only seems to be rising. Modern wildfires are not only burning larger areas but are also more harmful for people, forests, and the

environment. Nearly 100,000 structures have burned in wildfires since 2005, with two-thirds of those since 2017. Recent wildfires have killed between 13 and 19 percent of the world's remaining giant sequoias. And they have released massive quantities of harmful air pollutants, including 112 million tons of carbon dioxide in California alone during 2020—the equivalent of adding 25 million cars to the state's roads. Human lives are disrupted, species are imperiled, and our economy suffers.

To combat this wildfire crisis, we believe that all land management tools should be available to protect human life, property, and ecological diversity. Development that recognizes inherent wildfire risk, tactics that acknowledge a changing climate, and a vastly expanded prescribed fire force are needed to tackle the wildfire crisis. Human development in the wildland-urban interface is a clear challenge. Climate change, particularly in the dry forests of the western US, exacerbates past land management strategies that have ignored the consequences of fire suppression and exclusion. In those landscapes, forest management activities that increase the resilience of forests while also modifying available fuels are fundamental to solving the wildfire crisis we face. When done right, active management sustains forest carbon, which also leads to environmental resilience, enhanced biodiversity, and outdoor recreation opportunities.

Ultimately, the most viable tool to reduce out-of-control wildfires and thus reduce costs will be expanded use of prescribed fire. In order to reach that point, we advise increased funding for workforce training, fire science research, and increased liability protection for those burners that literally carry the torch. These investments will enable private and public lands to confront the wildfire crisis with the best of our country- our global leadership in science, education, and our work ethic.

I'm looking forward to answering your questions on wildfire and prescribed fire solutions today. We rely on strong partnerships with the federal government and appreciate the opportunity to discuss this important issue further.