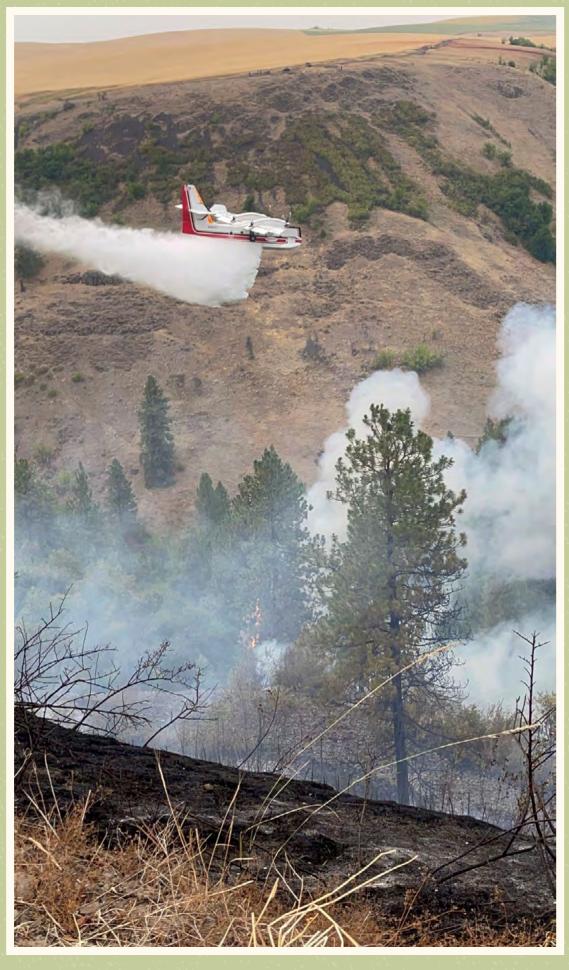


Final Report by the 5th Biennial John Freemuth Student Congress, Boise, Idaho









ABOVE Pine Creek Fire 2021 © NIFC // COVER Little Pine Fire 2021 © Idaho Dept Lands, Ashley Stoneham

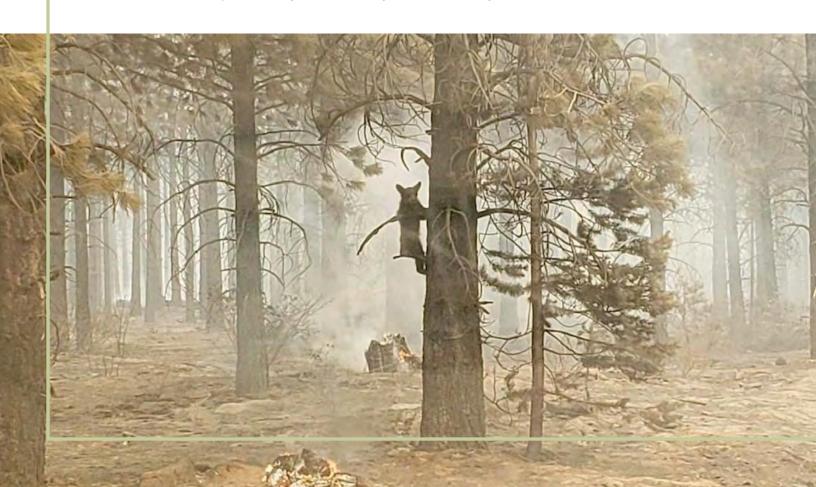


## PEOPLE-FOCUSED FIRE CULTURE

Wildfires in the United States have become measurably larger, more frequent, and more severe in the 2000s<sup>1</sup> and are projected to keep increasing in extent as a result of climate change<sup>2,3</sup> and the latent effects of nearly a century of fire suppression policies<sup>4,5</sup>. That said, fire is both an endemic part of our ecosystems—crucial to their health and persistence—and a core element of our culture<sup>6</sup>. To adapt to the realities of both our climate and fuelaccumulation crises, it is essential that land managers incorporate human-focused and science-based solutions into fire management activities. The Fifth Biennial John Freemuth Student Congress created recommendations for the future of fire management in public lands. The proposals outlined below all stem from our operating ethic: people-focused fire culture. We are pleased to present the following five recommendations for United States agency and community wildfire management.

# UTILIZING ADAPTIVE METHODS FOR EFFECTIVE LANDSCAPE MANAGEMENT

To manage public landscapes effectively for the health and resilience of ecosystems and communities, policies must be relevant and flexible. Adaptive management is a structured approach to decision-making that is useful when there is substantial uncertainty regarding the most appropriate strategy for managing natural resources<sup>7</sup>. The stages of adaptive management are plan, do, and evaluate/learn. This strategy creates a cycle that is self-regulating and evolving. Fire policy and management must be adaptable and well-funded. We recommend implementing the following wildfire management structure.



### **PLAN: PRE-FIRE**

Comprehensive pre-fire planning will shift management efforts from reactive to proactive. Prefire preparedness includes vegetation and fuels treatments. Wildfire will never be controlled, but with increased investment in large-scale fuel treatments, the most significant fire events can be limited in size and severity.

### Recommendations

- Permanently fund dedicated wildfire operations in future budgets.
- Collaborate with local and regional stakeholders before fires occur to create management priorities and action plans that are equitable.
- Expand the use of prescribed burn and fuel reduction projects.
- Utilize special authorities under the Healthy Forest Restoration Act to expedite fuel-reduction projects in high-risk areas.
- Capitalize on the flexibility of multiple-use missions to involve industry partners that create demand for healthy ecosystems and stimulate local economies including wood products and agriculture.
- Make regular and substantive updates to preparedness plans.

### **DO: DURING FIRE MANAGEMENT**

Effective and efficient fire management has goals and objectives that are interwoven with locally-based policies and plans. These local values are dependent on important factors such as geography, resource planning, funding, culture, and community.

### Recommendations

- Reframe assumptions that suppression is necessary. Adjust incident decision-making processes to accommodate and control potentially ecologically beneficial wildfires.
- Engage with stakeholders and incorporate local knowledge when outside Incident Command teams take over the decision-making process during a wildfire event.

### **EVALUATE AND LEARN: POST-FIRE RESPONSE**

After a wildfire, there can be a resource vacuum. This is the most important time to reevaluate, re-organize, and re-prioritize resources to ensure a smooth handoff from national teams to local land managers.

### Recommendations

- Conduct after-action review and be transparent about what did and did not work.
- Evaluate the effect of fire on communities and ecosystems to inform investment in equitable restoration priorities.
- Capitalize on the temporary engagement and momentum of recently fire-affected communities to update local fire-preparedness action plans.

### **COLLABORATION**

We recommend funding programs that allow Federal, Tribal, state, and local leaders to engage with residents and underrepresented communities who may have input on fire management at the local level. The following initiatives will facilitate increased collaboration in wildfire management:

Expand the Collaborative Forest Landscape Restoration Program

model that has successfully engaged fire-prone communities. Organizations like the National Forest Foundation can expand their provision of neutral facilitators to collaboratives.

Increase collaborative fire response in community fire tending

partnerships like the
Rangeland Fire Protection
Association. In this
successful collaboration,
land management agencies
equip landowners with
tools, training and
resources to manage fires
in their communities.

In the aftermath of a major fire event, direct resources towards enhancing community partnerships.

Community engagement while approaching post-fire recovery in a collaborative and forward-thinking manner will help to build local capacity for future fire stewardship and response.





"The John Freemuth Student Congress was an inspiring event that in many ways humanized public lands decision-making, and set us on course to multiply our connections, motivation, and knowledge of solutions." — 2022 Attendee



## EMPLOYMENT and WORKFORCE



To expand the roles of firefighters to include community outreach, fuel reduction work, and participation in collaboratives, land management agencies must be able to retain and recruit a qualified workforce. Federal wildland firefighters are underpaid, overextended, and provided with limited support networks. Additionally, hiring and onboarding is laborious and agencies are losing candidates to the hiring process. This is especially true for temporary seasonal workers, who repeat these processes each year. We recommend the following initiatives to foster a more sustainable workforce for wildfire management.



### **RECRUITMENT & ONBOARDING**

The current centralized process of hiring firefighters is onerous for hiring managers and potential employees. The federal hiring process takes months, making it difficult to anticipate when a candidate might start committing to leases, leaving jobs, and even planning a move.

### Recommendations

- Decentralize hiring so that communication between candidates, hiring managers and human resources is more transparent and more efficient.
- Streamline the onboarding process for temporary seasonal workers who return to the workforce annually.

### RETENTION

There is a shortage of wildland firefighters, leaving many federal agencies understaffed. Wildland firefighters are asked to perform intense, dangerous labor that takes them away from home for long stretches. Agencies will continue to lose employees as state or private organizations, such as CAL FIRE, outpace federal agencies in compensation and benefits.

### Recommendations

- Make bonuses and pay increases from the Infrastructure Investment and Jobs Act permanent.
- Provide federal preparation and travel (portal to portal) pay for wildland firefighters.
- Provide a stipend that covers the full cost of expensive boots.
- Implement a program similar to the GI bill to provide educational opportunities to off-season firefighters and to encourage them to stay in the profession.
- Create more competitive pathways to permanent and stable positions.

### MENTAL HEALTH & PHYSICAL SAFETY

The firefighting profession has a mental health crisis. Firefighters are affected by depression, PTSD, and suicide, at a rate higher than the national average. Additionally, firefighters are exposed to dangerous amounts of smoke.

### Recommendations

- Increase access to affordable therapy and implement an end of the season counseling session to help aid seasonal transitions.
- All agencies should mandate 3 days off after 14 days of work.
- Fund additional research on the health effects of wildfire smoke and provide free cancer screenings.



### SCIENCE and TECHNOLOGY

Science and technology can be used to both increase wildfire management and equitably engage communities.

The following are key areas that we recommend for improvement.

### **UPGRADE MATERIALS AND METHODS**

Increase funding for researching and designing safety equipment, and use tools in remote sensing and data research to analyze areas and communities affected by wildfire.

### **CREATE ACCESSIBLE DATA**

Government agencies have a wealth of data. Organizing and presenting the data in accessible forms allows the public to engage with and learn from this information. Maps can automatically update and are effective in any language to convey details like areas of risk or evacuation routes.

### **IMPROVE MODELING AND METRICS**

Most predictive fire models currently focus on understanding how a fire will behave in a landscape. Vulnerability models might instead focus on areas of potential catastrophic wildfires. Additionally, fires are reported in acres burned regardless of the positive or negative impact it might have on the local people or ecosystems. Shifting metrics toward measurements such as homes lost, people evacuated, or ecosystems at risk emphasizes the impacts of a fire beyond its size.

### LEVERAGE BUSINESS PARTNERSHIPS

With technology as an integral part of our daily lives, partnerships with app developers and websites serve as a reliable way to communicate with the public. Weather reporting websites, hiking trail apps, and navigation services are all examples of platforms that could feature fire-related advisories or evacuation routes.

### **IDENTIFY UNDERSERVED AREAS**

Increase the presence and continuity of federal aid to traditionally underserved communities and rural economies during pre and post-fire operations.

### INCORPORATE TRADITIONAL KNOWLEDGE

Traditional fire knowledge and practices have been refined over far longer periods than current methods and are often tailored to a specific region. The efficacy of these methods and the indigenous understanding of fire aligns with modern goals for fire management and should be equitably incorporated into current practices.

**EDUCATION and OUTREACH** 

Expanding outreach and education about fire ecology and management will build trust between stakeholders and managers, increase awareness of and compliance with Firewise practices, and foster collaboration with communities to expand crucial fire treatments. We recommend the following education and outreach initiatives.

### UPDATE FIRE MANAGEMENT LANGUAGE AND RHETORIC

Fire is a natural phenomena yet the way we frame it evokes fear and misunderstanding. The language we use to describe and treat wildfire is the language of war. If we are to convince people that some amount of fire is good and necessary and part of a healthy ecosystem, we recommend moving away from words that frame fire as an enemy.

### FOSTER STEWARDSHIP IN SCHOOLS

Growing a generation engaged in and receptive to fire management must begin with an education that incorporates fire ecology and an unabridged history of fire in the United States. We recommend providing the necessary resources for school districts to create educational programs that incorporate local fire history, indigenous fire knowledge, and an ethic of stewardship and shared responsibility.

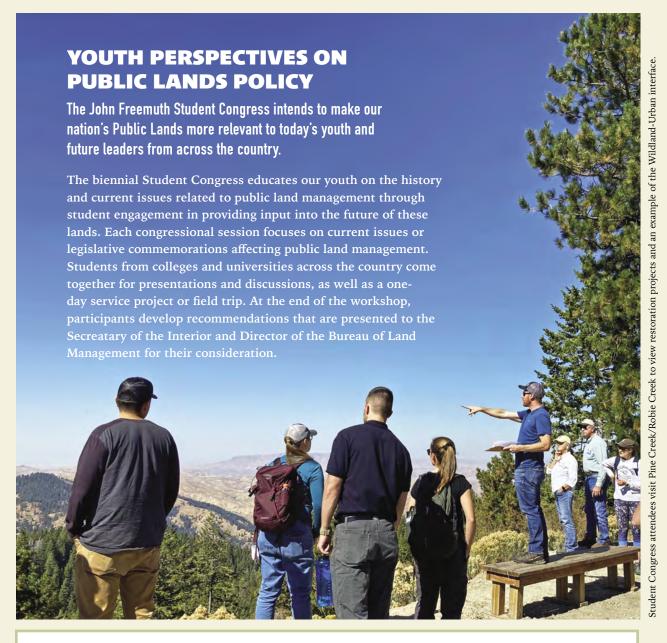
### FUND COLLEGE ELECTIVES OR YOUTH TRADE CERTIFICATES IN FIRE MANAGEMENT

Opportunities to grow careers in fire management should be more widely and equitably available. Members of our group had the opportunity to become wildland firefighters through college electives - initiating the passion for fire management that spurred their participation in the Student Congress. These programs should be endorsed, funded, and replicated across the country.

### LEVERAGE EXISTING SYSTEMS TO EXPAND FIRE MESSAGING

Existing structures that lie at the interface of people and nature should be used to spread awareness of Firewise practices. We recommend incorporating more fire safety information into hunting licenses and Leave No Trace Principles.

- <sup>1</sup> Iglesias, V., Balch, J. K. & Travis, W. R. U.S. fires became larger, more frequent, and more widespread in the 2000s. Sci Adv 8, eabc0020 (2022).
- <sup>2</sup> Gao, P. et al. Robust projections of future fire probability for the conterminous United States. Science of The Total Environment 789, 147872 (2021).
- <sup>3</sup> Brown, E. K., Wang, J. & Feng, Y. US wildfire potential: a historical view and future projection using high-resolution climate data. Environ. Res. Lett. 16, 034060 (2021).
- <sup>4</sup> Pausas, J. G. & Keeley, J. E. A Burning Story: The Role of Fire in the History of Life. BioScience 59, 593–601 (2009).
- <sup>5</sup> Pausas, J. G. & Keeley, J. E. Wildfires and global change. Frontiers in Ecology and the Environment 19, 387–395 (2021).
- <sup>6</sup> Bowman, D. M. J. S. et al. The human dimension of fire regimes on Earth. Journal of Biogeography 38, 2223–2236 (2011).
- <sup>7</sup> Williams, B. K., Szaro, R. C., & Shapiro, C. D. Adaptive Management: The U.S. Department of the Interior Technical Guide. (2009).



THE 5<sup>TH</sup> BIENNIAL

JOHN FREEMUTH

STUDENT CONGRESS

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ADDITIONAL INQUIRIES: Public Lands Foundation / www.publicland.org / StudentCongress@publicland.org