Colorado State University
Public Lands Policy Group

Research Brief for Practitioner Paper #13: An Interim Report
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ASSESSING HOW FUEL TREATMENTS ARE CONSIDERED DURING INCIDENT RESPONSE

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We are conducting research about how US Forest Service (USFS) fuel treatments are considered and incorporated into wildfire response by incident management teams. Our goals are to: 1) understand how forest and fire personnel communicate about existing treatments; 2) understand what treatment characteristics they look for to meet different objectives; and 3) gather recommendations for improving fuel treatments to support incident management. To date, we have conducted 27 interviews with fire and fuel personnel in the western United States. We conducted two case studies of 2020 wildfires where existing fuel treatments were considered in incident response: the Cameron Peak Fire in Colorado and the Bighorn Fire in Arizona. Herein we report on interim findings, while we continue our study looking at additional fires from 2021.

Key Findings

Fire management personnel and fuels planners agreed that existing fuel treatments are useful during incidents for tactical advantage (e.g., initial fire assessment, burnout operations, and access points) regardless of whether the fire directly intersected the treated area. Most interviewees also stated that fuel treatments allow for increased time efficiencies, responder safety, and enhanced containment opportunities. In some cases, treatments are used for contingency planning.

In both case studies, fuel treatment information was shared during the initial incident briefing and then informally passed along to new incident management teams (IMTs). During incidents, the information sharing process was contingent on individual personalities, experience in the local fuel type, leadership direction, and team culture and composition. Some interviewees thought a systematic process to share local fuels data could be useful; others encouraged the integration of decision support tools to support communication about treatments between the agency and other response partners, even before fires start.

When deciding to utilize a treated area during an incident, interviewees said they consider characteristics such as the fuel treatment's age, (which affects whether fuels have grown back), proximity to roads or other sites, connectivity of treatments, and treatment size. Strategic treatment placement and ongoing maintenance are also key elements for optimal treatment utility during a fire. Interviewees emphasized that contextual factors such as weather, fire behavior, wildfire location, resource availability, staff personalities, and unit culture also influence the decision to use a fuel treatment.

Our findings revealed that consistent treatment maintenance, the culture of communication about treatments, local expert knowledge, and unit/team composition are important components of how fuel treatments are evaluated and integrated during incident response. Ongoing challenges for fully capitalizing on fuel treatments during incidents include staffing and equipment limitations, and divergence in leaders' acceptance and willingness to support strategically implementing and using fuel treatments.

Recommendations

The following is a synthesis of the key recommendations our interviewees offered regarding how to best support the integration of existing fuel treatments into wildfire incident response:

- To support fire incident response and integration of treatments, communication before fires start among USFS staff members and potential fire response personnel (including state and local fire response partners) builds relationships, trust, and understanding of the local fuel management plans.
- Direct and purposeful communication among fuels planners and IMTs (i.e., between IMTs and fuels planners, and from one IMT to the next) would allow for more consistent information transfer during incidents.
- The USFS as an organization and forest-level leadership should encourage the integration of decision support tools and resources designed to support coordinated communication during incidents and provide easily accessible fuel treatment information.
- The USFS should commit resources to address staffing and equipment limitations to support strategic fuels planning, implementation, and regular maintenance of treatments to create and maintain fuels treatments that can be useful during future incidents.

Next Steps

We are continuing our investigation with additional case studies of 2021 wildfires that were in proximity to fuel treatments. Interviews are currently in progress. We will issue a final project report in 2023.

More Information

Find reports and other publications about this research at:
https://sites.warnercnr.colostate.edu/courtneyschultz/plpg-practitioner-papers/

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