Northwest Fire Science Consortium
A JFSP FIRE SCIENCE EXCHANGE NETWORK

POLICY BARRIERS & OPPORTUNITIES FOR PRESCRIBED FIRE APPLICATION IN THE WESTERN US

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Prescribed fire is an important tool for maintaining the resilience of fire-dependent ecosystems. Despite broad recognition of its value, however, prescribed fire application in the western US has not been applied at the necessary levels. Past research has identified a range of factors, such as weather, planning delays, and lack of funding or personnel, that can constrain use of prescribed fire in different locations. Past research had also suggested that policy-related concerns can inhibit prescribed fire application, although it has been unclear if challenges rested in national policies, state regulations, or other aspects of policy implementation. This distinction is important because different policy barriers require different solutions. Barriers in law require amending legislation or regulation at the national or state level, whereas overcoming policy implementation challenges may depend on improving communication among key actors, providing adequate resources to implement existing policy, improving leadership direction, or restructuring incentives.

For this study, researchers conducted 54 key informant interviews across the 11 western states to investigate policy-related barriers to prescribed fire on federal lands. In particular, they examined how laws, policies, and policy implementation affect prescribed fire application, and identified common challenges to and opportunities for increasing application.

KEY FINDINGS

- The most common and significant barriers to burning that interviewees cited were:
  - Inadequate funding and capacity (e.g. resources, knowledge), for both planning and implementation, especially when burn windows coincided with wildfire seasons.
  - A lack of incentives for prescribed burning.
  - The complexity of implementing burns, including policy-related requirements.
- Key strategies that interviewees suggested for increasing prescribed burning included:
  - Supporting multiparty, collaborative forums to facilitate resource-sharing, communication among actors and with the public, and place-specific problem solving.
  - Streamlining resource sharing opportunities through interagency agreements.
  - Increasing dedicated prescribed fire capacity, especially during wildfire season.
  - Investing in improved smoke monitoring data and modelling.
- Various aspects of policies and policy implementation presented challenges in different locations, but there were no individual policies that acted as consistent or primary barriers.

The Northwest Fire Science Consortium is a regional fire science delivery system for disseminating knowledge and tools, and a venue for increasing researcher understanding of the needs of practitioners.

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RESULTS: BARRIERS TO BURNING

Lack of funding and capacity. Interviewees said the most significant barrier they face is a lack of adequate funding and capacity (e.g., equipment, knowledge, and people to conduct work). Interviewees described:

- Challenges with staffing burn teams to take advantage of narrow burn windows. They said this challenge was particularly difficult during wildfire season, when personnel with skills to conduct prescribed burns were staffing wildfires, and in early spring and late fall when the seasonal workforce is less available.
- Issues with adequate staffing year-round for conducting NEPA planning, resource clearances, and developing burn plans.
- Increasing budget concerns as growing proportions of agency budgets were redirected to other priorities (e.g., fire suppression, meeting timber or treatment targets, conservation of at-risk species).
- The importance of resource sharing across jurisdictions and organizations in the face of decreasing federal capacity, as no one agency typically had all the necessary personnel and equipment to conduct prescribed burning safely and effectively. They said they needed more streamlined agreement mechanisms, consistent direction, and greater capacity for writing agreements with other entities.

Lack of incentives and the importance of leadership. Interviewees described challenges due to a lack of incentives for prescribed fire, which meant that prescribed fire programs often depended on personal commitment from individuals. Interviewees explained the following dynamics:

- Limited incentives to conduct prescribed fire.
- Low risk tolerance and liability concerns that limit some decision-makers' willingness to burn.
- Agency staff that were primarily trained for fire suppression, or not trained in fire management, and thus were less interested in using prescribed fire.
- Increased risk-aversion and concern about lack of public support for prescribed burning during or after major wildfire events, particularly at higher levels of the agency.

Policies and regulations. Policy, regulation, and permitting were not found to be key barriers to conducting prescribed burns, except in limited contexts and circumstances. Interviewees described dynamics such as:

- Endangered species protection that affected funding and planning for prescribed fire. For instance, some interviewees said that sage grouse concerns led to both funding reallocations (away from prescribed fire) and burning restrictions.
- Obtaining air quality permits was a constraint in specific circumstances such as: highly protected airsheds, near population centers, in areas subject to temperature inversions, and in Oregon and Washington, where state-level regulations were relatively more strict. Most interviewees said that air quality regulators are willing to work with them to find opportunities to burn.

MANAGEMENT IMPLICATIONS

Opportunities for increasing the application of prescribed fire may depend on improving collaboration and providing resources needed to implement existing policy. Strategies that interviewees highlighted included:

- Supporting multiparty forums for burners and air quality regulators in order to:
  - build relationships and mutual understanding,
  - share resources to capitalize on restrictive burn windows,
  - facilitate place-specific problem solving,
  - develop coordinated communication strategies, and
  - manage competition in airsheds.
- Streamlining resource-sharing opportunities through interagency agreements at the national and state levels, or an interagency resource-ordering system. Increasing the knowledge and use of existing authorities for cross-boundary resource-sharing.
- Increasing dedicated prescribed fire capacity, especially during wildfire season.
- Improving incentives for agency leaders to implement prescribed fire and for fire-qualified personnel to work on prescribed fire (e.g. through improved compensation).
- Investing in improved smoke modelling and monitoring data to bettter find and communicate about burn windows. Assessing air quality at more local levels will better tailor permitting decisions to local conditions.

MORE INFORMATION

This brief is based on the following article:

Schultz C.A., McCaffrey S.M., Huber-Stearns H.R. 2019. Policy barriers and opportunities for prescribed fire application in the western United States. *International Journal of Wildland Fire* 28: 874-884. Available at: https://doi.org/10.1071/WF19040.

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