



Ecosystem Workforce Program

BRIEFING PAPER NUMBER 31

SPRING 2011



SAWMILLS, BIOMASS FACILITIES, AND HAZARDOUS FUELS REDUCTION: DOES LOCATION MATTER?

MAX NIELSEN-PINCUS, SUSAN CHARNLEY, KATE MACFARLAND, AND CASSANDRA MOSELEY

Severe wildland fire has become one of the most significant resource management challenges that the USDA Forest Service faces. National policy has focused on reducing uncharacteristic fuel loads and wildfire risk. However, the cost of hazardous fuels reduction is high. Utilization of small diameter trees and brush offers the potential to reduce treatment costs. But, we do not know how close sawmills and biomass facilities need to be to treatments to have an impact. This research examined how the locations of sawmills and biomass facilities influenced the amount of hazardous fuels reduction accomplished by the Forest Service, associated biomass utilization, and contracting mechanisms used to implement hazardous fuels treatments.

Approach

We compared locations and amount of hazardous fuels treatments that the Forest Service conducted in Oregon and Washington between 2005 and 2010 with locations of sawmills and biomass facilities, using GIS to analyze the road networks between them. Information about hazardous fuels treatments came from the National Fire Plan Operating and Reporting System (NFPORS).

Findings

The results suggest that sawmills and biomass facilities must be located in close proximity (about 30 miles) to hazardous fuels treatments to encourage these treatments. We found that biomass is utilized from only about 10 percent of acreage treated, even though nearly two thirds of treatments occur within 40 miles of sawmills and biomass facilities. Still, proximity to these facilities influences the location and number of acres of fuels reduction projects, utilization of biomass,

and use of stewardship contracting. For example, compared with ranger districts located far away from facilities (greater than 30 miles), ranger districts that are closer to sawmills and biomass facilities:

- Conduct treatments on more acres overall.
- Conduct more treatments in the wildland-urban interface.
- Are nearly twice as likely to utilize biomass from forest harvests, such as patch clear cuts and selection cuts.
- Are over three times more likely to use stewardship contracting and about one third less likely to use timber sales to accomplish biomass removal and utilization.

When ranger districts are over about 30 miles from sawmills and biomass facilities, their proximity to these facilities is much less likely to influence treatment and contracting strategies, and number of acres treated.



UNIVERSITY
OF OREGON

INSTITUTE FOR A SUSTAINABLE ENVIRONMENT
5247 University of Oregon
Eugene OR 97403-5247
T 541-346-4545 F 541-346-2040
ewp@uoregon.edu • ewp.uoregon.edu

PACIFIC NORTHWEST RESEARCH STATION
620 SW Main St.; Suite 400
Portland, OR 97205
<http://www.fs.fed.us/pnw/>



Implications

Our analysis suggests that stewardship contracting, biomass utilization, and close proximity of sawmills and biomass facilities can help the Forest Service increase hazardous fuels treatments. The presence of these facilities has a limited influence on hazardous fuels treatments that take place farther than about 30 miles away, however. A network of multiple small-scale processing facilities distributed across forest-based communi-

ties could be more effective than a small number of large facilities for increasing the number of acres treated and the frequency of biomass utilization from hazardous fuels reduction on Forest Service lands.

More Information

More information about this project is available at ewp.uoregon.edu/HazardousFuelsReduction.

This briefing paper was made possible with funding from the USDA Forest Service, National Fire Plan, Ford Foundation, and University of Oregon.