



Increasing Requests for Wildfire Risk Assessments

Letters mailed to property owners in two Montana counties increased the number of requests to schedule on-site risk assessments.

Target a Priority Outcome Wildfires destroyed an average of 9,604 structures per year in the United States between 2015 and 2019,¹ but property owners who take action to reduce wildfire risks on their property can decrease risk to homes, neighboring properties, and firefighters. In Montana, property owners can request that a fire professional conduct an on-site wildfire risk assessment. An assessment can help property owners understand potential risks and how to mitigate them, but to date very few people have used this free service. A priority for the Montana Department of Natural Resources and Conservation (DNRC) and U.S. Department of Agriculture Forest Service is to increase participation in this program to promote fire-adapted communities.

Translate Behavioral Insights Property owners do not typically receive any proactive communication about wildfire risk assessments and may not be aware of the free DNRC program or know how to submit a request. Some property owners may not take action because they underestimate the likelihood and potential consequences of wildfires.²

The Montana DNRC collaborated with OES, the Forest Service, and University of Montana Human Dimensions Lab to design and test a low-cost behaviorally informed intervention - a letter mailed to property owners - aimed at

increasing utilization of this program. One version of the letter provided information about how to request an assessment; a second version of the letter provided the same information plus a statement highlighting wildfire risks to one's own property. Because the potential benefits to others may better motivate individuals to take action than the benefits to one's self,³ a third version of the letter provided information plus a statement about how taking action to reduce risk may protect their community. The DNRC also redesigned the request form to make it easier to submit a request from their webpage.

Embed Evaluation The evidence-based insight was tested with a property-level block-randomized control trial. The three different versions of letters were mailed to a sample of property owners in Park and Gallatin Counties in Montana in September 2019. A total of $N = 9,109$ properties in the two counties were located in moderate or high wildfire hazard areas and had valid mailing addresses. The properties were block-randomized by county and wildfire hazard area to one of four groups. One group ($n = 5,206$) was not sent any version of the letter.⁴ The three remaining groups were sent one of the letters: the information-only letter ($n = 1,300$), the information plus personal-risk framed letter ($n = 1,303$), or the information plus community-risk framed letter ($n = 1,300$).

¹ National Interagency Coordination Center. 2015-2019. Wildland Fire Summary and Statistics Annual Report. https://www.nifc.gov/fireInfo/fireInfo_statistics.html.

² Meldrum, James R., Patricia A. Champ, Hannah Brenkert-Smith, Travis Warziniack, Christopher M. Barth, and Lilia C. Falk. "Understanding gaps between the risk perceptions of wildland-urban interface (WUI) residents and wildfire professionals." *Risk analysis* 35, no. 9 (2015): 1746-1761.

³ Asensio, Omar I., and Magali A. Delmas. "Nonprice incentives and energy conservation." *Proceedings of the National Academy of Sciences* 112, no. 6 (2015): E510-E515.

⁴ The study design randomly assigned approximately 3,900 properties in the no-letter group to a Spring 2020 mailing group. Due to the coronavirus pandemic this second phase of mailing was cancelled and the Spring 2020 mailing groups were included in the no-letter group.

Analyze Using Existing Data The Montana DNRC collects requests made via a publicly available web-based form and by phone. The share of requests was compared among property owners in each of the four groups to determine whether sending a letter and different risk messages affected the likelihood of requesting an assessment.

Results Sending letters increased the likelihood that property owners requested a risk assessment by 6.9 percentage points ($p = .00$, 95% CI [.061, .077]), resulting in 271 additional requests. Only two of the 5,206 property owners who were not sent letters requested a risk assessment. Differences between versions of the letters were not statistically significant, but the analysis can rule out differences in request rates between letters as small as 2.5 percentage points. Letters highlighting personal or community risk increased requests by 0.5 percentage points over the information-only letter ($p = .57$, 95% CI [-.012, .022]); the community-risk letter increased requests by 0.6 percentage points over the personal-risk framed letter ($p = .58$, 95% CI [-.014, .025]).

Differences in the effects of letters by county and wildfire hazard area were not statistically significant. The effect of sending a letter was 0.5 percentage points higher in Park County compared with Gallatin County ($p = .57$, 95% CI [-.012, .021]), and was 2.0 percentage points higher among properties in high hazard areas compared with those in moderate hazard areas ($p = .11$, 95% CI [-.005, .044]).

Build Evidence The results indicate that sending letters with information about a wildfire risk assessment program is an effective strategy to encourage requests. Awareness of the program may be the greatest barrier to requesting a risk assessment; low-cost methods of informing property owners about how to request an assessment may yield the largest increases in requests. Additional evaluations of outreach strategies could focus on encouraging assessment requests among property owners in high-hazard areas, who were slightly more likely to respond to letters.

