

Wildfire Preparedness and Evacuation Planning in a Pandemic

RECOMMENDATIONS FOR 2021

The COVID-19 pandemic significantly changed how wildfire preparedness, evacuation planning, response, and recovery efforts were implemented across the western United States in 2020. Changes were seen in methods of collaboration, modes of communication, institutional and operational arrangements¹, budget allocations and funding availability, with long-term impacts on mental health and community well-being.

The western United States is likely to experience another severe wildfire season in 2021². Even as communities get vaccinated over the next months, and the pandemic seemingly recedes³, there remains uncertainty around community preparedness and evacuation planning in a pandemic⁴. It will be important to comprehensively prepare ‘whole of community’ for the evolving nature of the wildfire-pandemic interface⁵. Moving forward, policy, programs, and research will need to converge around a better understanding of social, ecological, and public health dimensions to address the evolving wildfire-pandemic interface in inclusive, just, and equitable ways.

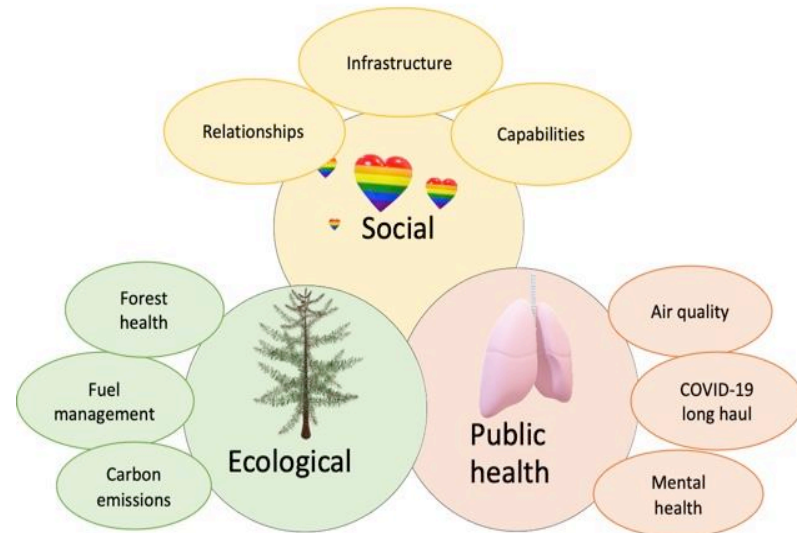
Fortunately, important lessons can be applied from the past year. Based on longitudinal research⁶ (June 2020 – February 2021) conducted in Nevada County, California, and Larimer County, Colorado, this research brief recommends 22 priority actions across 9 areas and 3 cross-cutting dimensions for communities working to reduce wildfire risk while recovering from the COVID-19 pandemic.

SOCIAL DIMENSIONS

Relationships:

1. Continue to rely on asynchronous collaboration tools and virtual modes of communication to strengthen multi-scalar relationships between institutions, communities, and service providers.
2. Redesign community outreach and local awareness campaigns in ways that people from diverse backgrounds can safely come together for community preparedness days, prescribed burn trainings, and evacuation drills.
3. Engage early with people who are likely to require assistance in interpreting alerts and safety messages, creating defensible space, preparing for Public Safety Power

Shutoff’s, planning for safe evacuations, accessing vaccinations and personal protective equipment (PPE).



Infrastructure:

4. Maintain evacuation routes, roads, and highways.
5. Ensure structural integrity of essential infrastructure and utilities, especially water and electricity.
6. Continue to implement COVID-19 related health and safety protocols in community centers, hotels, fair grounds, and shelters, including pet and animal shelters.
7. Monitor housing market, poverty rates, including ‘hidden poverty’, displacement, and migration trends as communities and businesses adapt to the fallout of last year’s wildfire-pandemic interface.

¹ [Prevention and management of COVID-19 during wildland fire operations](#). National Wildland Coordinating Group.

² [Drought-plagued California and western United States may see another devastating fire season](#). The Washington Post. April 10, 2021.

³ [New COVID outbreaks are walloping Oregon and Washington](#). San Francisco Chronicle. April 30, 2021.

⁴ [Scenarios for compound disasters: COVID-19 and wildfire management](#). Northern Research Station Highlights.

⁵ [Changing risk and burden of wildfire in the United States](#). PNAS. January 12, 2021.

⁶ [Wildfire preparedness and evacuation planning in a pandemic](#). CONVERGE COVID-19 Working Groups for Public Health and Social Science Research.

Wildfire Preparedness and Evacuation Planning in a Pandemic

RECOMMENDATIONS FOR 2021

Capabilities:

8. Formalize partnerships and ensure interoperability with local and adjacent communities, institutions, utilities, transport, and health care providers. Anticipate fast changing conditions, including COVID-19 transmissions, and have contingency plans in place.
9. Adopt community-centered and collaborative wildfire management arrangements that draw on local and indigenous environmental knowledge and build on diverse community capabilities, including, the experiences of incarcerated and migrant workers.
10. Ensure contingency stocks of PPE, in case of continuing COVID-19 transmission, and the spread of other infectious viruses.
11. Prepare go-bags and practice 'Ready, Set, Go!' with households and neighborhoods, including all of community.

ECOLOGICAL DIMENSIONS

Forest health:

12. As COVID-19-related fiscal impacts continue into 2021, communities could consider setting up forest health /prevention funds and look to private capital and philanthropic funds to undertake large forest management projects.
13. Explore the implementation of environmental sensing networks for air, water, soil quality monitoring before, during, and after wildfires, and secondary hazards.

Fuel management:

14. Continue defensible space work on private land in physically distant ways and in the absence of local crews, create incentives for volunteers to help households in need of assistance, including mobile home parks.
15. Continue fuel management activities, including prescribed burn trainings, in physically distant ways, following local health and safety protocols.

Carbon emissions:

16. Create fire breaks along agricultural and ranch lands to reduce WUI-related carbon emissions; protect soil and agricultural land from smoke, debris, and contaminants that may affect water and harvest quality; and protect the health of seasonal farm workers by making vaccinations and PPE easily accessible.

PUBLIC HEALTH DIMENSIONS

Air quality:

17. Develop new standards to protect structures from wildfire smoke impacts, including measures to improve ventilation, circulation, and filtering of indoor air, especially in schools, health facilities, and care homes.
18. In the absence of current standards, homeowners can repair or replace doors, windows, and vents with major air leaks, and use caulk, weather-proofing tape or sealants to fill in small openings.
19. Subsidize the instalment of clean air rooms, and make respiratory protective equipment including personal respirators and air filters easily accessible in socio-economically disadvantaged neighborhoods. Also include residents in mobile home parks and people living in informal housing or on the streets.

COVID-19 long haul and disabilities:

20. Ensure people with COVID-19 long haul and disabilities, have equitable access to vaccinations, clean air rooms, power back-ups, PPE, meals on wheels, relevant and accessible emergency alerts, transportation for early evacuation, and continued access to personal care even during an evacuation.

Mental health:

21. Ensure people from diverse cultural and linguistic backgrounds have equitable access to mental health and spiritual care support near where they live/ through culturally relevant tele-health providers.
22. Conduct mental health campaigns to encourage people, especially children and older adults, to process their grief and trauma by journaling, drawing, and sharing experiences and concerns with a mental health worker, therapist, or trusted circle of care.

Learn more about the research study here:

<https://wildfirepandemic.wixsite.com/workinggroup>

Contact: Dr. Shefali Juneja Lakhina, [Wonder Labs](mailto:shefali@lakhina.com) at shefali@lakhina.com

This COVID-19 Working Group effort is supported by the National Science Foundation-funded Social Science Extreme Events Research (SSEER) Network and the CONVERGE facility at the Natural Hazards Center at the University of Colorado Boulder (NSF Award #1841338). Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the NSF, SSEER, or CONVERGE.