

Overview of post-wildfire research

2018 Camp Fire (Paradise and Magalia, CA)

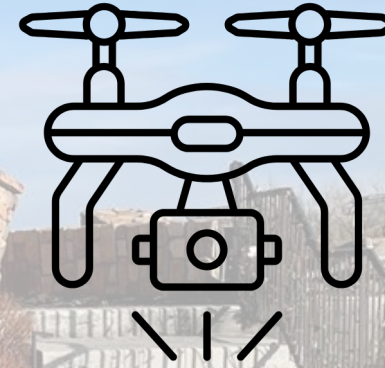
- Fire impacts on schools and hospitals
- Fire impacts on water distribution systems

2020 Labor Day Fires (Oregon)

- Fire impacts on water distribution systems

2021 Marshall Fire (Boulder County, CO)

- Fire impacts on water distribution systems
- Characteristics of homes that influenced survivability
- Data collection on fire impacts to all civil infrastructure (GEER)



Post-wildfire data collection grants:

RAPID/Collaborative Research: Data collection on Wildfire Urban Interface (WUI) for schools and hospitals following the 2018 California Camp Fire (CMMI 1917298)

Natural Hazards Center, Post-Wildfire Damage: The 2018 Camp Fire in Paradise, California

RAPID/Collaborative Research: Investigation of 2021 Marshall Fire Impacts on Physical Infrastructure and Decision-Making Processes

Geotechnical Extreme Event Reconnaissance (GEER): The 2021 Marshall Fire, Boulder County, Colorado

Water Research Foundation: Water Utility Resilience: A Case Study of the 2021 Marshall Fire

Key findings

Water infrastructure:

- Extreme demands on the water distribution systems and leaking of burned down homes can cause depressurization
- Depressurization and presence of plastic pipes can cause VOC and SVOC contamination in the water distribution systems

Schools:

- Layout of school grounds can provide fire breaks around a school limiting damage
- Teachers and counselors can be overwhelmed with their duties

Houses:

- Characteristics of houses and neighborhoods that influence survivability can vary by jurisdiction
- In high dense WUI communities, characteristics of houses and neighborhoods that influence survivability can look different than what previous research has shown
- Firefighting efforts should be documented as to not attribute survivability falsely

Lessons learned



Have a plan.

Thinking through pre-planning can help everyone on the team understand the team objectives and make data collection go smoothly.

Collaboration is the name of the game.

Work with people you trust and who value your contribution. Field work is hard and the data will be scattered amongst many people, if there isn't true collaboration or trust, the team will break down.

Physical and mental team safety is critical.

Post-fire zones are hazardous and can be difficult to navigate mentally. As a team leader you are responsible to ensuring the team's physical and mental safety is paramount.

Be an example for the rest of the team.

Everyone will look to you on how to behave.