

Data collection for post-Wildland Urban Interface (WUI) fire investigation

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Project goals and objectives



Data collection challenges

Documented mitigation techniques

Ember exposure

Heat exposure

Energy released by fire

UNKNOWN



Post-fire condition of buildings

Wind speeds

Weather conditions during fire

Satellite images of fire movement

KNOWN



Data collection methods

Observations
& Photos



LIDAR



Drone



Interviews



Data collection methods

Observations & Photos



Observations of fire damage to structures
(nonstructural and structural)

LIDAR



Quantify fire damage to structures
(nonstructural and structural)
Quantify fire damage to surrounding vegetation

Drone



Quantify fire damage to structures
(nonstructural and structural)
Quantify fire damage to surrounding vegetation



Data collection methods

Observations & Photos



LIDAR



Drone



Summarize the damage (structural and nonstructural) to schools and the hospital campus within Paradise due to the 2018 Camp Fire
Identify commonalities in damage (structural and/or nonstructural)



Data collection methods

Observations
& Photos



LIDAR



Drone



Summarize the **damage (structural and nonstructural)** to **schools and the hospital campus** within Paradise due to the 2018 Camp Fire
Identify **commonalities in damage (structural and/or nonstructural)**

Interviews



Biggest lessons learned on data collection

- ✓ All four data collection techniques combined allowed us to achieve our goals and objectives,
- ✓ Multiple visits to the town helped narrow the scope for the RAPID facility, familiarize ourselves with the town, and ingratiate the research team and build trust with stakeholders,
- ✓ Listening to the survivors stories provided them with an outlet for healing and developed trust,
- ✓ Presenting data back to the town stakeholders helped build trust,
- ✓ Trust the PIs and employees at the NHERI facilities – they are the experts!
- ✓ Think about data processing as a part of your research methodology.



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