



UL's Fire Safety Research Institute Fact Sheet

About Fire Safety Research Institute:

- UL's Fire Safety Research Institute (FSRI) advances fire safety knowledge to address the world's unresolved fire safety risks and emerging dangers. As part of UL Research Institutes, the non-profit safety science organization within the UL enterprise, we are committed to sharing our fire safety insights with everyone to advance UL's public safety mission of providing safe living and working environments for people everywhere.
- Through advanced fire science, independent research, extensive outreach and education in collaboration with our international network of partners, we impart stakeholders with the information, tools and resources that enable them to make better, more fire-safe decisions that ultimately save lives and property.
- Since 1894, UL has objectively researched safety issues and evaluated products to address fire, shock and casualty risk. It is from this commitment to safety science and a desire to help others that FSRI was born as UL Firefighter Safety Research Institute in 2013 with the purpose of increasing firefighter knowledge to reduce injuries and deaths in the fire service and in the communities they serve.
- Collaboration with the fire service is the foundation of our body of work. We have historically focused on fire dynamics, fire service tactics and strategies in residential, commercial and industrial structures through full-scale testing, field testing, modeling and sharing information through online and classroom education. Many of our staff have both served as firefighters or fire investigators and earned advanced degrees in science and engineering fields.
- Realizing a growing need, FSRI and our partners have begun to extend beyond fire dynamics to work with the fire investigation community and address adjacent research topics including wildland urban interface and materials thermal decomposition.
- In line with this expanded focus and purpose, in July 2021 we made the strategic decision to evolve the logo and name of our organization to UL's Fire Safety Research Institute (FSRI). Our partnership with the fire service remains at the core of our work, continuing and growing to address the enduring hazards they face. We also extended

our collaborative model to actively engage other stakeholder groups including fire investigators, fire safety engineers, academia, government, industry, safety educators and the public.

- FSRI's work is funded through grants, contracts and the business activities of UL Research Institutes' business solutions affiliate, UL Solutions.
- To learn more, visit fsri.org. Follow the FSRI on [Facebook](#), [Instagram](#), [LinkedIn](#) and [Twitter/X](#).

FSRI's Role in Reviewing the Maui Wildfire Incident:

- At the request of the Department of the Attorney General of the State of Hawaii, FSRI is deploying a multi-disciplinary team of fire safety experts to conduct a comprehensive analysis of the Maui wildfires that will include a review of activities related to prevention, preparedness and response. The objective of this analysis is to discover and share findings from the tragic Lahaina fire to help the affected communities rebuild with resilience, to mitigate future loss of lives and property.
- Information gathered during the initial discovery of FSRI's work will stem from an extensive review of the facts surrounding the events, analysis of existing programs and operational procedures, evaluating compliance with and performance of current standards, codes, and evidence-based practices, while also providing recommendations for improvement where appropriate. Findings from this phase will inform the trajectory of FSRI's scope of work related to the incident.
- FSRI experts are working closely with the residents of Lahaina, local and state leaders, and municipalities to collect data related to the incident.
- FSRI is working independently, and in parallel with other agencies, such as local emergency response service providers and emergency management, the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), Department of Defense (DOD), Federal Emergency Management Agency (FEMA), National Institute of Standards and Technology (NIST), United States Fire Administration (USFA) for the purpose of data and evidence sharing to streamline timeframes and avoid duplication of efforts.
- FSRI's work does not include an analysis of the cause of the ignition or re-ignition of the fire.

Analysis Plan, Deliverables & Timeline

FSRI will conduct a three-phase review and analysis, with the timing of each phase being shared with the public. Additional time required will be announced if necessary to assure a thorough investigation. A report for each phase will be produced by FSRI and released to the public by the Attorney General's office.

- **Phase 1: Fact-finding about how the fire incident unfolded.**
This phase will yield an Incident Timeline Report that features a comprehensive timeline from investigating government agencies with respect to the time of ignition through the start of structure to structure spread.

- **Phase 2: Analysis of the data, determining how various fire protection systems functioned in this fire incident.**

This phase will yield an Incident Analysis Report that includes analysis of the collected data and documents how various protection systems functioned during the incident.

- **Phase 3: Best practices that incorporate additional data and recommendations for Hawaii to take action toward prevention.**

This phase will yield a Forward Looking Report to answer the question, “how do we prevent this from happening again?” with recommendations, strategies and tactical considerations from subject matter experts.

FSRI’s Related Experience

- In addition to over a decade of fire safety research, FSRI has conducted multiple examinations of fire incidents as part of the [Study of Firefighter Line of Duty Injuries and Near Misses](#) to impact change across firefighter tactics, codes, and standards.
- Specifically, FSRI conducted an analysis of the lithium-ion battery energy storage system explosion in [Surprise, Arizona](#) that included first responders, utility company, maintenance personnel, and nearby community members.
- FSRI is currently studying structure to structure fire spread mechanisms to inform control measures and reduce risk in the urban and WUI environments. The research project, [Heat Transfer from Structure Fires](#) looks at heat transfer from structure fires to other targets such as nearby structures, vehicles or responding firefighters and has critical implications for establishing proper control measures, protecting firefighters, and supporting code development.
- The members of the FSRI team participating in this analysis have experience in fire safety research, wildfire and wildland urban interface response, structural firefighting, structure to structure heat transfer research, and leveraging partnerships and community engagement to better understand incidents. In addition, FSRI experts have been first responders to many large-scale WUI fires, participated in Significant Incident Review Teams (SIRT) for large-scale WUI fire incidents, and contributed to significant fire investigations, such as the Station Nightclub fire and the Cook County Administration Building fire.

Have information, videos, or photos of the incident? Email them to maui@ul.org.