

United States Fire Administration

A Prepared and Resilient Fire and Emergency Medical Service





Federal Fire Prevention and Control Act of 1974

Public Law No. 93-498

- Defined the primary missions of the agency
- Established the National Fire Academy (NFA) (training and development)
- Management and delivery of public education, data collection, and research and technology
- Oversight and support responsibilities for the National Emergency Training Center (NETC)









We <u>support</u> and <u>strengthen</u> the fire and emergency medical services ... to prepare for, prevent, mitigate, and respond to ALL Hazards...

- ★ Fire and EMS Training
- ★ Research
- **★** National Fire Data Center
- **★** Community Risk Reduction

*CRR= Process to identify and prioritize local risks, integrated / strategic investment of resources to reduce risk occurrence and impact.





THE MISSION



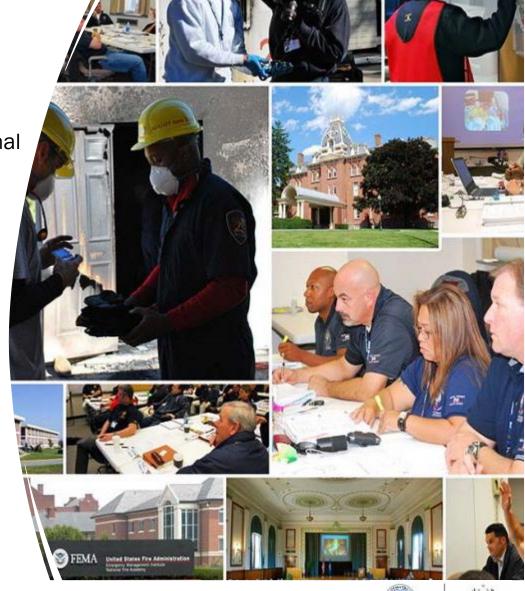


National Fire Academy: Preparedness

 The purpose of the National Fire Academy is to promote the professional development of the fire and emergency response community and allied professionals.

 Supplement and support State and local fire service training and educational programs and reaches over 90,000 students annually

- NEW: Responding to the Interface (*Community Conflagrations)
- Wildland Firefighter GAP (NWCG/NFPA)
- Wildland Firefighter (NWCG Hybrid/On-line)
- Introduction to Wildland Urban Interface Evacuation Planning and Procedures
- Wildland Urban Interface: Fire-Adapted Communities
- Developing a Community Wildfire Protection Plan
- WUI: Strategies for Developing a Fire-Adapted Community
- WUI: Fire-Adapted Communities Introduction and Leadership
- All WUI Training resources at https://www.usfa.fema.gov/wui/training/



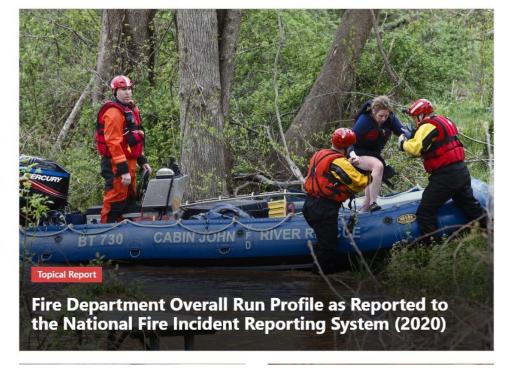




National Fire Data and Research Center

- Statistical reports explore aspects of the U.S. fire problem that affect Americans in their daily lives.
- Today...Primarily based on data collected through the National Fire Incident Reporting System (NFIRS), our reports address
 - the nature and relevance of the specific fire or fire-related problem
 - highlight important findings
 - suggest other resources to consider for further information



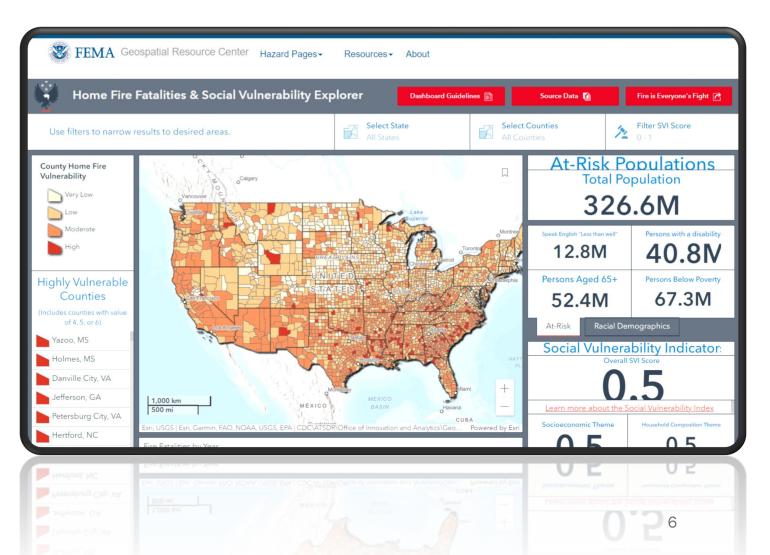






National Fire and EMS Programs

- Community Risk Reduction
 - fire prevention
 - Home Fire Fatality Tracking
- Special Operations
 - Integrated Response with LEOs
 - Complex/ Cascading Events
- EMS
 - Stakeholder engagement
 - COVID
 - Active Shooter
 - Curriculum consultation
 - Research consultation







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Oct. 8, 2024

Add to calendar

U.S. Fire Administrator's Summit on Fire Prevention and Control

National Emergency Training Center Emmitsburg, Maryland

Join fire service leaders as they present testimony to federal leaders on challenges facing the fire service.





Lead and inform the discussion on the fire safety of lithium-ion batteries and other alternative energy sources within our communities, at all levels of government, and with industry partners.

Priority 1: Determine risk to the public and firefighter health from li-ion battery incidents

Priority 2: Conduct a consumer education campaign

Priority 3: Conduct necessary research to inform the other priorities and fire service response organizations



When Technology INCREASES Risks: **FIRE**

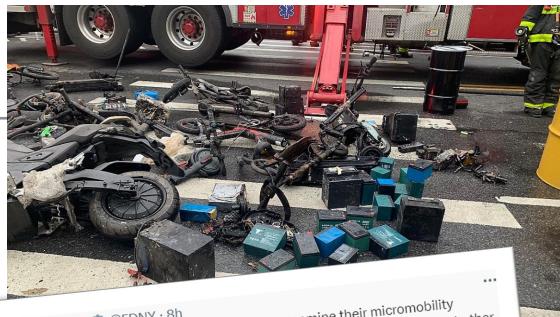
The increased use of micro-mobility devices, powered by lithium-ion batteries, introduce a new fire and explosion hazard to the fire service work environment.

The New York City Fire Department - lithiumion battery fires caused **270 fires**, injured 150 people and killed 18 in 2023.









In this new PSA, we urge the public to examine their micromobility devices/batteries for damage, to see if they are certified & conduct other safety checks. So far there's been 76 lithium-ion battery related fires causing 60 injuries and 7 deaths. on.nyc.gov/42GxqHH

- If your device is blocking exits or windows, MOVE IT.
- If your battery doesn't have approved safety certifications, DON'T USE IT.
- If you're charging your batteries, BE PRESENT, and NEVER CHARGE THEM OVERNIGHT.
- If your batteries are damaged or after-market, DON'T USE THEM.





Prepare all firefighters and communities to respond safely and effectively to **climate** change driven events.

Priority 1: Review the 2023 Wildfire Commission's report, cross walk to the workgroup effort



- Priority 2: Identify the gaps in training and look for interoperability
- Priority 3: Consider community engagement and communication
- Priority 4: Develop better practices for recruitment and staffing
- Priority 5: Develop right practices of responding and mobilization







On the Ground in Lahaina

- USFA focused on the investigative opportunities
 - how the fire moved,
 - the wind impact,
 - the fuel load that enabled rapid and extensive spread
 - human behavior during evacuation
- Firefighter well being (exposure tracking)
- Response resources and training
- USFA participated in a FEMA postfire Mitigation assessment team (MAT)











On the Ground in Lahaina, Maui

- 1- Year Anniversary
 - Debris removal near complete
 - Firefighters enhanced training
 - Mental health resources
 - Healing along with the community
 - More firefighters/ response vehicles
 - Landscape / ecosystem renovation





Wildfire Field Sensors



Phase 3: Beta Sensor Operational, Test & Evaluation

1 Performer / 250 Sensors

- 1+ million hours of data (18 sec) for enhanced AI / ML algorithms
- Enhanced sensor: Comms, transmission, website & dashboard
- Air Quality indicators
- 2 modes for alerts: High & Low Sensitivity settings
- False positive rate of 0.06%
- 1 Wind Sensor for every 5 ChemNode sensors (micro-weather)
- 10-25 sensors / stakeholder (working with local Fire Chiefs)
- 1 sensor / 1-3 sq miles (1,000 2,000 acres) or ~ \$10/acre coverage
- Hawaii: 4 mobile sensors / Fire District for post-burn monitoring
- IPAWS / Waze Mass Notification Systems (MNS) demonstration

Stakeholders	Wildfire	Wind	~ Deploy
	Sensors	Sensors	Date
Kauai, HI	20	4	July '24
Maui, HI	20	4	July '24
Hawaii, HI	20	4	July '24
Honolulu, HI	20	4	July '24
Palo Alto, CA*	5	4	Aug/Sept '24
Stanford, CA*	10	4	Aug/Sept '24
Woodside, CA*	10	4	Aug/Sept '24
Orange/Irvine, CA	20	5	Aug/Sept '24
Nevada, CA	15	4	Aug/Sept '24
Placer, CA	15	4	Aug/Sept '24
Sonoma, CA	15	4	Aug/Sept '24
Jefferson, CO	20	5	Aug/Sept '24
Gatlinburg, TN	25	6	Aug/Sept '24
	215	56	

^{*}Discussion: Community to 1:1 sensor match



FEMA/USFA Mitigation Assistance Advisory Released

1- Year Anniversary

The Building Science Disaster
Support Program released
Maui Mitigation Assessment
Team (MAT) Recovery Advisory
#1, "Wildfire Recovery
Resources for Maui."

The document is now available for public access on FEMA.gov http://fema.gov/bsds#library.

Field Visits to Active Wildfires in the WUI

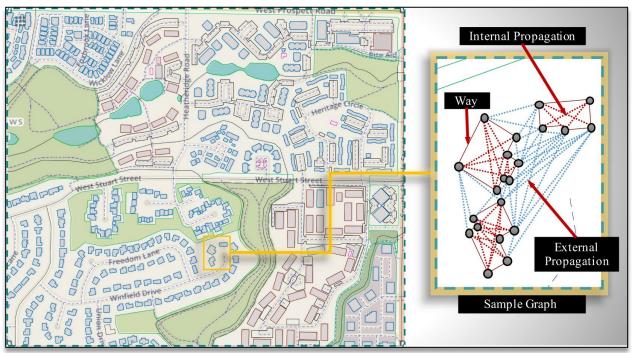


- U.S Fire Administrator Dr. Lori Moore-Merrell, joined Orange County Fire to visit the site of the Vista Fire in California.
- Meet with Orange County Fire Authority Air Operations crews and visit with the incident management team and firefighters.
- Receive a brief on night suppression operations.
- U.S. Fire Administrator remains on site of wildfires in southern California to visit with firefighters and the incident management team assigned to the <u>Lake Fire</u>.
- Join a flight mission to survey the damage and current activity



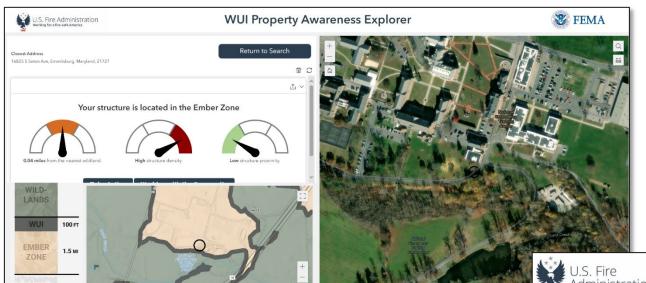
NEED: Quantifiable, Shared Understanding of Fire Risk

Fires have increased in frequency and intensity and have increasingly severe impacts on the built environment. Yet, we struggle to measure, understand, and predict fire risk consistently at the local level, on a nationwide scale.



- Today: National Risk Index includes Wildfire Risk, does not account for built environment.
- In Progress: Evaluating fire risk models and methods - Wildland, wildland urban-interface (WUI), community conflagration, and structure fire.
 - Focus on communities and the built environment.
 - Fuel load and fire propagation in built environment, and propensity for structure-tostructure spread.

Where is the WUI



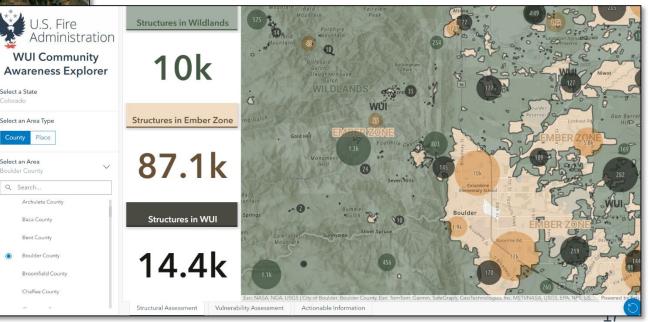
 Raise awareness about where WUI areas exist throughout the United States.

 Data-informed basis for residents to "Know Where You Live" in proximity to the WUI and fire prone areas.

Access the WUI Fire Awareness Apps







Individual Residential Fuel Mitigation

 Lead research efforts for fire resistant materials, fire detection, alerting devices and suppression technologies.

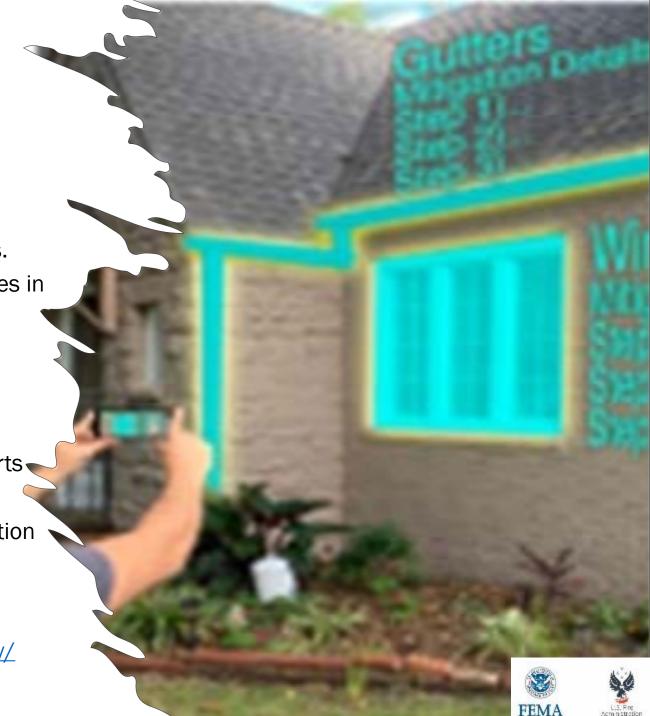
 Collaborate to conduct studies for recommended practices in responder health, safety and wellness

 Development, testing and evaluation of private or grant funded technology in collaboration with DHS S&T;

 USFA collaboration with the Department of Homeland Security's Science and Technology (S&T) directorate efforts

 Wildfire Augmented Reality app to identify home ignition vulnerabilities and recommend mitigation measures

 All resources available at: https://www.usfa.fema.gov/wui/research-technology/





Timeline: Wildfire Evacuation Initiative

Ready

- Preparedness: Ongoing Public Outreach & Education on RSG!

Set

- Readiness: NWS Red Flag Warning on fire conditions

Go

- Who Goes? - Where is GO?

2nd Wildfire Evacuation Roundtable

USFA to host 2nd Wildfire Evacuation Roundtable to address the strategic issues and gather requirements for the ConOps/Guidance

October

2024

DRAFT Wildfire Evacuation ConOps/Guidance

USFA releases draft Wildfire Evacuation ConOps/ Guidance for a 30-day National Engagement period.

December

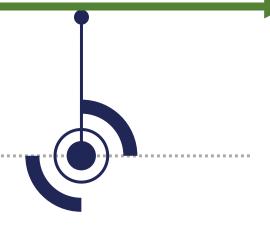
2024



Wildfire Evacuation ConOps/Guidance

USFA to collaboratively work with the community in developing a comprehensive Wildfire Evacuation ConOps/ Guidance that provides standardized lexicon and guidance on:

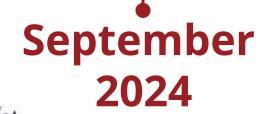
- Operations
- Communications
- Data and Tools



Tabletop Exercises to Validate ConOps/Guidance

February-April 2025

USFA, in partnership with the FEMA National Exercise Division, will design, plan, and conduct a series of tabletop exercises to stress test and validate the draft ConOps/ Guidance.





Create safer communities by implementing and enforcing codes and standards, especially in the wildland urban interface (WUI) and under-served and vulnerable populations, providing affordable and fire-safe housing.

- Priority 1: More fire service and government involvement to promote and protect the latest national codes and standards processes
- Priority 2: Change the laws and/or regulations to require homes receiving federal funding be built to the latest national codes and standards
- Priority 3: Create an advisory committee for the US Fire Administrator according to the authority of section 12 in the Fire Prevention and Control Act

Wildfire Risk, Resilience, and Insurance / NEXT

July 10, 2024 - The American Property Casualty Insurance Association (APCIA), the Insurance Institute for Business & Home Safety (IBHS), and the United States Fire Administration (USFA) jointly hosted an Executive Discussion on Wildfire Risk, Resilience, and Insurance.

Objectives:

- Collectively learn about advances in wildfire science.
- Review and discuss findings of the Wildland Fire Mitigation and Management Commission.
- Identify opportunities for public-private collaboration in advancing individual and community-level resilience to wildfire.

Action Plan

- Released August 9
- Example: insurance discounts or tax incentives for property owners implementing specific mitigations











Fire Stop Tour Tribal Communities Nov 19-22, 2024



Establish a comprehensive firefighter cancer strategy that invests in research, provides access to cancer screenings for firefighters, and reduces and eliminates PFAS exposure.

Priority 1: Establish an exposure center of excellence and strategy to increase the enrollment in NFR and nation-wide studies of firefighters and sharing the data

Priority 2: Maintain the momentum of the elimination of PFAS

Priority 3: Establish a national initiative to harmonizing state presumptive legislation



Provide comprehensive mental health and well-being resources for all fire and EMS personnel

- Priority 1: Convene a sub workgroup for mental resilience
- Priority 2: Develop unified, evidenceinformed messaging that raises awareness about mental health and well-being, and disseminates approaches for resilience building
- Priority 3: Explore approaches to decrease barriers (funding, licensing, access, availability) and increase fire/EMS personnel access and availability to resources



Champion out-of-hospital EMS and integrate innovative practices to improve overall health, safety, and wellbeing in local communities.

- Priority 1: Identify EMS players and roadmap within the federal government
- Priority 2: Identify local EMS models
- **Priority 3:** Identify national organizations, influencers, and regulators
- Priority 4: EMS Recruitment
- **Priority 5:** Identify barriers to equity in EMS care delivery

EMS Challenges

UPDATED: ATCEMS, APD respond to multiple overdoses in downtown Austin



Fentanyl State of Emergency 2024 Multnomah County · City of Portland · State of Oregon







Fire and EMS Challenges

Explosion at homeless encampment injures, hospitalizes LA firefighter responding to flames

An explosion burst through as firefighters addressed a fire that burned through half an acre near a homeless encampment.



10 a.m. ET June 25, 2024 Updated 8:56 a.m. ET June 25, 2024







Renton firefighters extinguish 40-foot flames at massive encampment fire

ckie Kent, KOMO News Reporter | Wed, July 31st 2024 at 12:56 PM ated Thu, August 1st 2024 at 1:00 PM









Embrace a culture of data and technology

Priority 1: Support, propagate, & champion NERIS

Priority 2: Develop a Culture-Tech Roadmap

Priority 3: Identify proven practices



National Emergency Response Information System (NERIS) | UL's FSRI – Fire Safety Research Institute



The goal of NERIS is to empower the local fire and emergency services community by equipping them with near real-time information and analytic tools that support data informed decision-making for enhanced preparedness and response to incidents involving all hazards.

Our Legacy System NFIRS: A Brief History

NFIRS Begins

America Burning released in 1973 lead to the establishments of USFA in 1974 with the Federal Fire Prevention and Control Act in 1974. NFIRS launches in 1975.



1985



First public release of NFIRS collected data.

NFIRS 5.0

NFIRS becomes an "all-hazard" data collection system with the addition of EMS data, wildfire data, and juvenile firesetter module.



2025



Decommissioning NFIRS Application

Driven by security concerns, outdated data models, and costs in maintaining code base, at the start of calendar year 2026, the NFIRS application will only accept incidents that occurred during calendar year 2025.





What is NERIS?



- Premier source for nationwide, all-hazards incident information.
- Source for understanding the Nation's fire problem.
- Data collection, management, and integration environment for firebased incident data.

Approach & Core Functionality

Secure and cloud-hosted architecture.

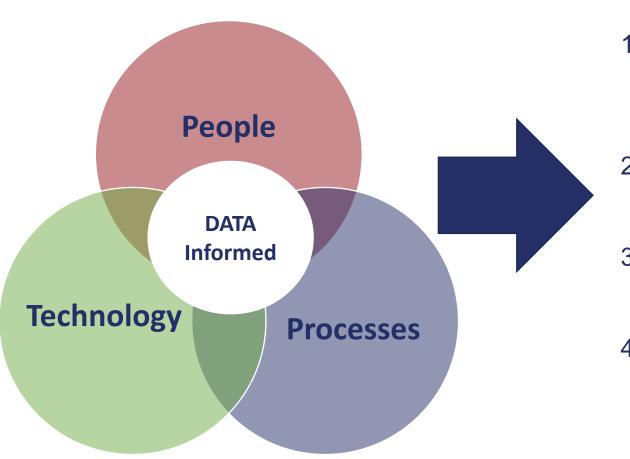
- Interoperability & data sharing via data services (APIs).
- Reduce data entry burdens via integration and analysis of data.
 - Computer-aided dispatch systems (CAD)
 - Geographic information systems (GIS)
 - Records Management Systems (RMS)





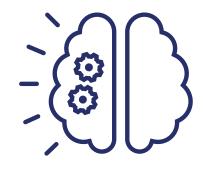


People + Process + Technology = Data-Driven Strategy



- 1. Fire service has access to the right intelligence at the right time to make data-driven decisions.
- 2. As impacts from incidents decrease, protection of life and property increase.
- 3. Communities are increasingly resilient to fire and other hazards.
- 4. Technology sector has access to better, more reliable data, in turn advances the analytic products and technology they provide to the fire service.









COLLECT

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CAD NERIS and/or **OR** Collection App





Data Enrichment

Data

Analytics





State Fire Marshal



NERIS External Data Hub



USFA & Other Federal Agencies



Local Fire Department

The Focus of NERIS:



- Social Vulnerability
- Structures in First Due
- Code Adoption
- Evolving Climate Hazards

RISK



- Resource Allocation
- Monitor Staffing Levels
- Station & Unit Capacity
- Geographic areas of concern

DEPLOYMENT



- Response Time
- Effective Crew Size & Response Force
- Inform Training Needs

PERFORMANCE

What Improvements Will NERIS Offer?





Enhanced Flexibility with Multi-Hazard Incident Reporting

Comprehensive Reporting: Move from a single-category system to a model supporting up to three incident types. This reflects the complexity often faced by fire services in real-world scenarios.

- For Firefighters: Simplify reporting by selecting incident types that accurately depict the scene, eliminating the guesswork of single-category constraints.
- For Chiefs/Data Analysts: Reduce reliance on interpreting free-text narratives, streamlining data analysis.

Historically limited incident type selection to only one incident type, whereas NERIS allows multiple types per incident.



In the last year or so...



October/November 2023

March 2024

October 2024

NERIS @ 6 mos

Kicked off panel meetings shared V0.1 of core schemas.



Conviened two-day meeting in Dallas, TX along with 6 prototype departments.

NERIS Today

Winding down Beta testing and in final proparations for a V1 launch.











Draft Core Data Elements

Initial version of core data schemas released for 60 days of National Engagement (> 1600 comments).

December 2023

Welcome, Vendors

Met with CAD/RMS Vendors and released beta development information for 3rd parties.

May 2024



NERIS 15 Month Timeline Outlook



V1 Core and Secondary Data Schemas Released

Public release of the Version 1.0 data schemas, data dictionary, and technical API documentation.









100+ selected fire departments to onboard and prepare to transition to NERIS for incident reporting. API connections established with applicable CAD & RMS.

November 2024

Jan-June 2025

Phase 2 & 3 Onboarding

Fire departments onboard in phases and start reporting incident data to NERIS. Increased number of API connections established.





Full Transition to NERIS

All fire incident reporting is conducted using NERIS exclusively. Legacy NFIRS application is decommissioned.



Phase 4 & 5 Onboarding

Fire departments onboard in phases and start reporting incident data to NERIS. Increased number of API connections established.

July-December 2025

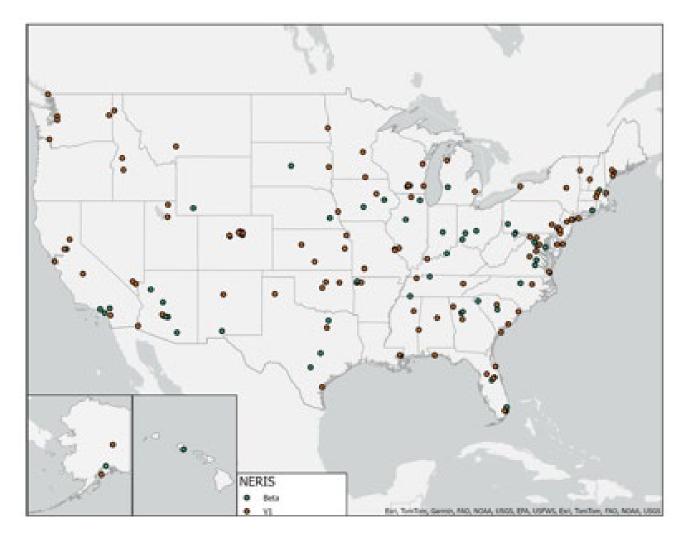


NERIS Beta & V1 Departments



Our **Beta & V1 Fire Departments** have led the way to improvements and features that improved NERIS from the initial platform.

- Intuitive user interface
- Logical data entry workflow
- Mobile friendly
- Common language







More Links for Information:

FAQs: https://www.usfa.fema.gov/nfirs/neris/about-neris

Website: https://fsri.org/programs/neris

Contact us: NERIS@ul.org















