

Nate Morgans NERIS TtT

- 918-855-5002
- nmorgans29@gmail.com
- Course ID# 101600
- NERIS TtT



NERIS Orientation

State of Oklahoma

July 2025



Science and
Technology



U.S. Fire
Administration



Research
Institutes

Fire Safety
Research Institute

Topic Areas

01



What is NERIS?

Purpose, Concept, Launch

02



System Development and Timeline

Managing users, department information, and technical references.

03



Key Features

Discussion on incident features and modernization examples.

04



FAQs + Additional Q&A

Answering some more common questions and an open discussion.



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.

The Focus of NERIS:



RISK

- Community Vulnerability
- Structures in First Due
- Code Adoption
- Evolving Weather Hazards



DEPLOYMENT

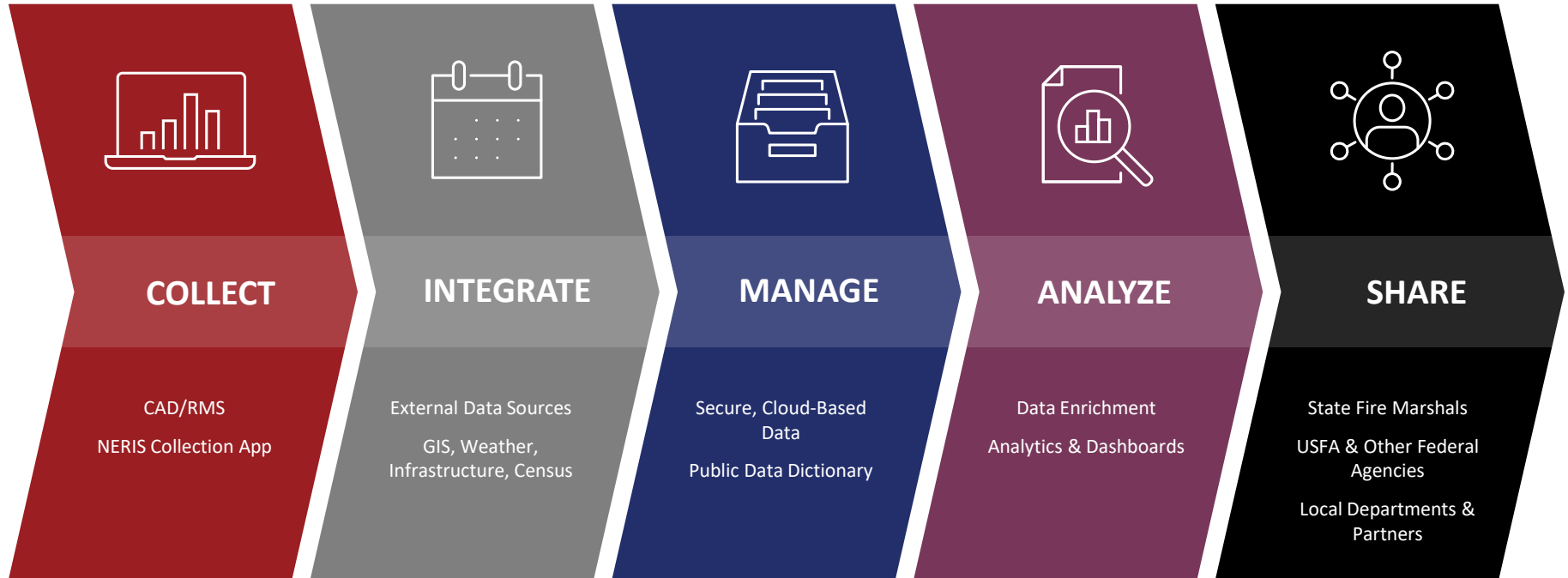
- Resource Allocation
- Monitor Staffing Levels
- Station & Unit Capacity
- Geographic Areas of Concern



PERFORMANCE

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

Fundamentally, NERIS



NERIS Perception

NERIS is more than simply a file cabinet of data or a replacement for the legacy NFIRS system.

NERIS represents a paradigm shift for data use, input and understanding for the fire service.

Data Schemas

The elements we collect. Designed to describe the work done by the fire service to help the people in the communities they protect.

System Architecture

The foundation of the system – built on an elastic framework for reliability and scalability.



Training

Leadership

Analytics

The value return on the data collected. Provides intelligence to help improve prevention efforts and emergency response

API

The API is the data hub for the system allowing the movement of data both internally (within NERIS) and externally (to/from entities).

Building **With** the Fire Service

OCT-DEC 2023

Data Framework & Architecture Development

Local stakeholders representing a national perspective provided requirements in the development of the NERIS data framework, schemas, and the open solutions architecture. National engagement on the data framework resulted in 1,600 comments.

MAR-DEC 2024

Prototype and Beta Testing

62 departments, representing a cross section of agency sizes and complexities, were charged with testing and evaluating the prototype NERIS.

NOV 2024

Version 1 Release

Version 1 of NERIS is launched! A total of 173 fire departments were onboarded onto V1 NERIS and began using the system to report and share incident data.

JAN 2025

System Live

The first fire department transition to the new system on January 2, 2025, from South Dakota.

APR 2025

Third-Party Connectivity

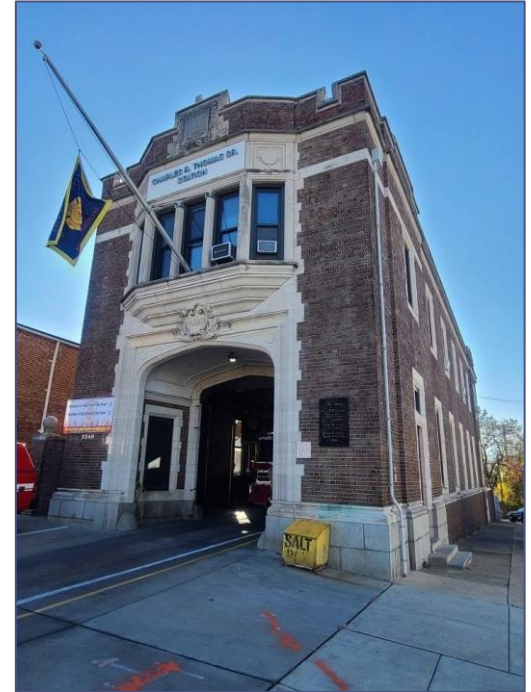
The first metro-sized fire department was also the first to connect to NERIS via a third-party in late April 2025 from the state of Virginia.

MAY 2025

FEMA Region Onboarding

On May 1st, FEMA Region 2 (New York and New Jersey) was the first to participate in large-scale onboarding, working in conjunction with the state fire marshals office. In just a single day, over 1,800 new fire departments were invited into the system to begin their NERIS transition.

Data is Essential to All Topics of Concern for Firefighters



Data-informed leadership will become the gold standard for the fire service

Data is a living resource that captures the full complexity of the incidents we respond to and the communities we serve.



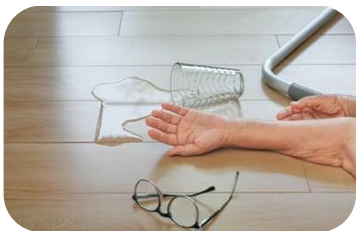
Photo: SBCFD

Why Fire Departments Need NERIS

- All-Hazards Incident Reporting
- Geospatial Focused
- Comprehensive Collection of Data Important for:
 - Performance Monitoring
 - Deployment Analysis
 - Risk Assessment
- Analytics and Data Dashboards
- Modernized Datasets and Values



Matching Risk & Resources



What Types of Incidents Go Into NERIS?

Fire Incidents

Traditional fire suppression incidents including outdoor, transportation and structure fires are included, along with special fires (explosions, energy storage systems and infrastructure) as well as different classifications for wildfires.

Hazardous Situations

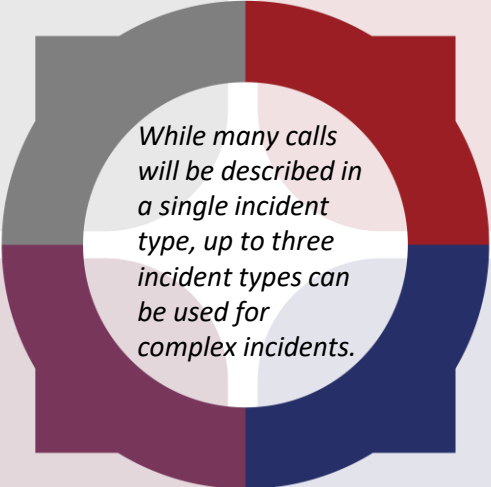
Hazardous situations or “HazSit” include chemical leaks and other hazardous materials emergencies, along with overpressure and other smoke/odor investigation situations.

Medical and Rescue Incidents

More detailed types of medical emergencies are included in NERIS, including the more precise rescue types. Medical calls are categorized as either injury, illness or other. Rescues are categorized as either outside/outdoor, structure/indoor, transportation or water.

Other Types of Incidents

NERIS is designed to be all hazards and includes numerous public services, cancelled, good intent, law enforcement support, false alarms and other types of calls.



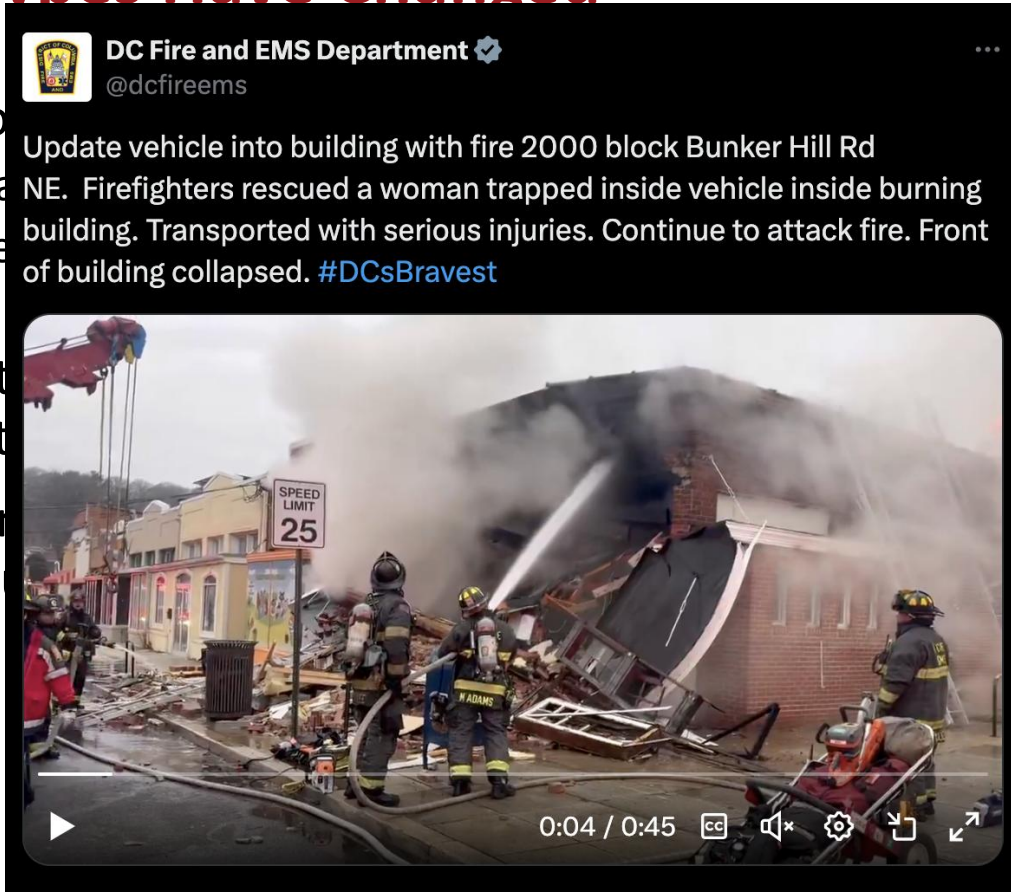
While many calls will be described in a single incident type, up to three incident types can be used for complex incidents.

02

Ten Things Chiefs Need to Know About NERIS

1 – Incident Types Have Changed

- Incident types changed
 - Dieted and streamlined
 - False alarm types reduced confusion.
- Multiple incidents at a complex incident
- A primary incident with appropriate ERF



Incident Types:

- Wildfire
- Wildland-Urban Interface
- Train & Rail Fire
- Aircraft Incidents
- Aircraft Fire, Aircraft Crash, Aircraft Standby)
- Specific Medical Incident Types

NERIS Incident Type(s)

Fire	Medical	Hazsit	Rescue	Public Service	No Emergency	Law Enforcement Support
Outside Fire	Illness	Hazard Non-Chemical	Outside / Outdoor	Citizen Assist	False Alarm	
Special Fire	Injury	Hazardous Materials	Structure / Indoor	Alarms (Non Medical)	Good Intent	
Structure Fire	Other	Overpressure	Transportation / Land	Disaster / Weather	Cancelled	
Transportation Fire		Investigation	Water	Other		

2 – The Story of “Where” is Finally Being Told

- Geocoded Address
- Intersections
- Map Point
- Map Polygon

Location Info

Is the incident best represented on a map as a point (e.g., address, intersection) or an area?*

☒ Point

☐ Area

Use the search bar to enter an address or place a point on the map where the incident occurred.*

Find address or place

+

-

Home

Location

Full Screen

Map

Layers

Print

Fullscreen

Monroe St

Reba Pl

Seward St

Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin... Powered by Esri

Lat: 42.029800

Lon: -87.683200

3 – Community Risk Reduction is Really a Priority

Fire Protection Information ▾

Describe whether there was at least one smoke alarm present.
Select one.

☐ Present ☐ Not Present ☐ Not Applicable

Describe whether the building was fitted with a whole building fire alarm system that includes fire detection devices, alarm pull stations, and alarm notification devices.
Select one.

☐ Present ☐ Not Present ☐ Not Applicable

Describe whether other alarm systems for detecting gases or other harmful conditions were installed within the building.
Select one.

☐ Present ☐ Not Present ☐ Not Applicable

Describe whether there was a fire suppression (sprinkler) system in the building.
Select one.

☐ Present ☐ Not Present ☐ Not Applicable

- CRR is integrated into the system in two primary ways:
 - As a reconnaissance tool within the incident module to collect fire protection system information in occupancies, regardless of incident type.
 - As a dedicated module (“CRR Module”) released in 2025 to help standardize CRR activities and understand the impact and work being done in non-emergency settings.

Incident Responses:
3/14/25 to 3/21/25
9 Medical Emergencies
and 3 Lift Assists

Incident Response

```
1 {
  "dispatch": {
    "center_id": "1234",
    "incident_number": "1725295157",
    "determinant_code": null,
    "incident_code": "STRF1",
    "type": "FIRE|STRUCTURE_FIRE|ROOM_AND_CONTENTS_FIRE",
    "disposition": "Structure fire suppressed on first alarm, -1 occupant rescued, occ",
    "automatic_alarm": false,
    "call_arrival": "2025-01-14T18:49:13+00:00",
    "call_answered": "2025-01-14T18:49:47+00:00",
    "call_dispatch": "2025-01-14T18:50:12+00:00",
    "unit_responses": [
      {
        "type": "Dispatch",
        "unit_neris_id": "FD240272145000U001",
        "reported_unit_id": "E84",
        "staffing": null,
        "begin": {
          "crs": "4326",
          "source": "DEPT_UPLOAD",
          "geometry": {
            "type": "Point",
            "coordinates": [
              -76.820114,
              39.186229
            ]
          }
        },
        "dispatch": "2025-01-14T18:50:12+00:00",
        "enroute_to_scene": "2025-01-14T18:51:13+00:00",
        "on_scene": "2025-01-14T18:53:54+00:00",
        "canceled_enroute": null,
        "staging": null,
        "unit_clear": "2025-01-14T19:36:33+00:00",
        "incident_clear": "2025-01-14T19:36:33+00:00",
      }
    ]
  }
}
```

Risk Reduction Activity

```
{
  "CRR": {
    "Type": "COMMUNITY_EVENT",
    "event_uid": "1725295157",
    "event_start": "2024-12-23",
    "event_end": "2024-12-23",
    "num_people_attended": "35",
    "num_people_engaged": "",
    "target_audience": [
      {
        "general_public": true
      }
    ],
    "activity": "CRR",
    "CRR_PAID": "CRR_PAID",
    "area": {
      "crs": "4326",
      "source": "DEPT_UPLOAD",
      "geometry": {
        "type": "Point",
        "coordinates": [
          -76.820114,
          39.186229
        ]
      }
    }
  }
}
```

Home Visit: Installation
of Bathroom Grab Bars
and Medication
Instruction Awareness
3/22/25

4 – Property Use Matters



5 – Low Frequency, High Risk Incidents Can Be Measured

1. Active Assailant
2. Mass Casualty Incidents
3. Federal Declared Disaster
4. State Declared Disaster
5. County Local Declared Disaster
6. Urban Conflagration
7. Violence Against Responder



6 – Information After Arrival is Prioritized

- Actions/Tactics
- Tactical Timestamps
- Fire Conditions
- Suppression Methods

Fire Incident Information ▼

Describe the primary nature of the fire incident.*
Select one.

► Details

☒ Structure Fire

☐ Outside Fire

Describe the extinguishment tools used for fire suppression.
Select all that apply.

Small Diameter (1 inch to 2 inch) Fi... ▼

Describes the type of water supply utilized for the incident.*
Select all that apply.

Hydrant (Est. Flow > 500 gpm) ▼

The fire conditions upon arriving on the scene of the incident*
Select one.

-Please select- ▼

Did the fire extend beyond the conditions found upon arrival?

-Please select- ▼



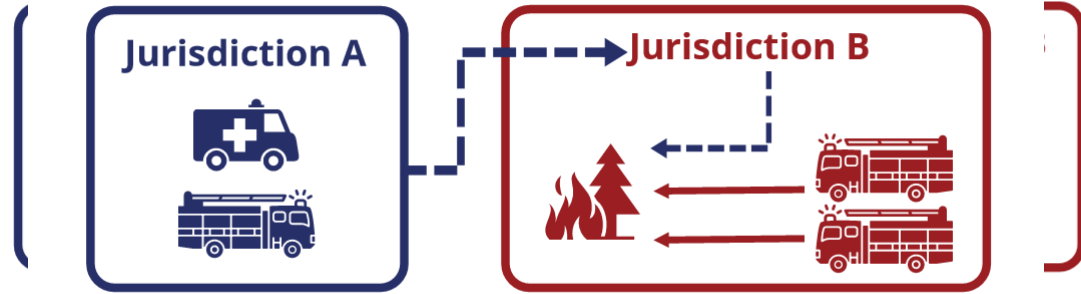
7 – We are Inclusive of Things That Matter

- Rescues
- Displacements
 - Individual people in residential settings
 - Businesses in commercial, industrial, mercantile settings
- Household pets rescued
- Maydays/firefighter rescues



8 – Aid is Streamlined and Simplified

- Interagency Aid:
 - In Support of
 - In Lieu of
 - Acting as



9 – Narratives Have a Purpose

Incident Narrative ▼

Please provide a description of any obstacles that impacted the incident.
Please take care to avoid entering any personal identifying information.

10000

Please provide a description of the final disposition of the incident.
Please take care to avoid entering any personal identifying information.

10000

- Improvements
- Version 2
- Dashboards
 - Incident Analysis & Investigation Data Capture
 - Rescue and Casualty Dashboards & Reporting
 - Emerging Hazards Dashboards & Reporting
 - Unit Utilization Dashboards & Reporting
- Ancillary and Supporting Work



10 – We Aren't Done: Data Augmentation

Active:

- Weather

In Development:

- Parcel data (HIFLD)

In Queue:

- PurpleAir (Air Quality) Sensors: Lat/Long based API
- USGS Live Stream Gauges (Feature Service)
- NASA FIRMS API / USA Active Wildfires (Feature Service)
- Sentinel 2 Land Cover Data
- Overture Building Data

2025

The Transition to NERIS

NERIS Onboarding

Two Phase Process



1

Creating Your Account

Fire departments can add/update attribute information after they activate their node in NERIS.



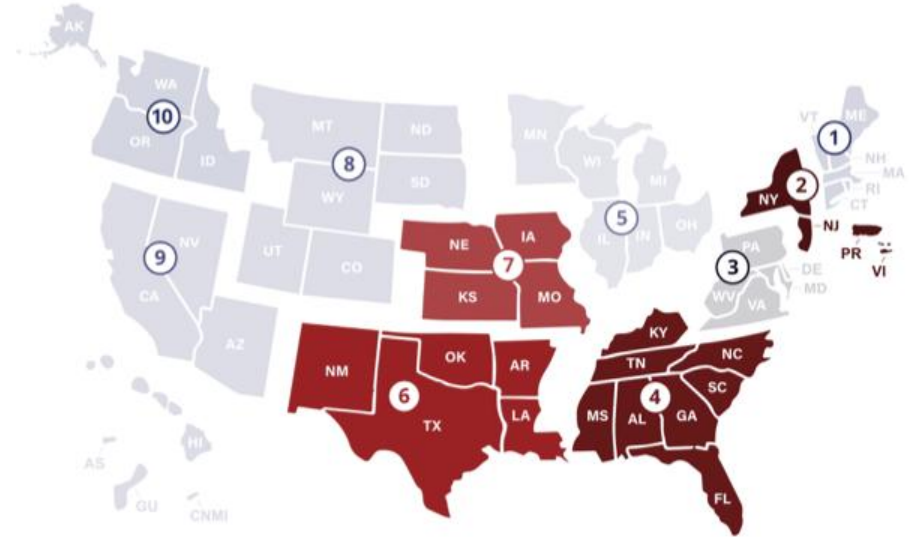
2

Reporting

- A) If using the NERIS collection app – submit HelpDesk ticket when ready.
- B) If using a third-party RMS – switch after your RMS is ready

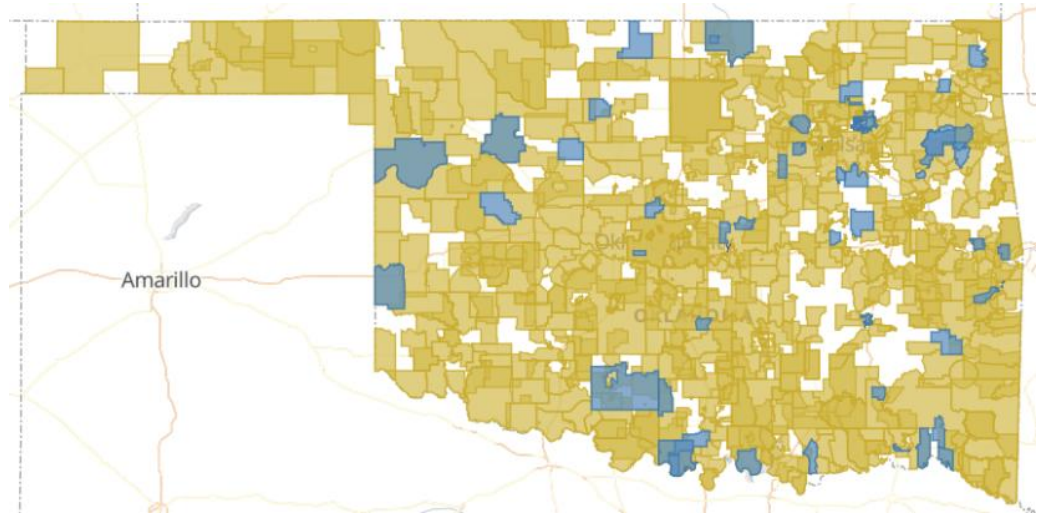
Common Onboarding Obstacles

- Geometry information and availability/accessibility of shapefiles
- Basic email functionality
- Retirements and points of contact
- Ambivalence - “I got time.”



Oklahoma Onboarding Status (AUG 14th, 2025)

- 708 Departments Invited
- 189 Verified Departments (Completed NERIS Onboarding)
- 67 Departments Reporting Incidents

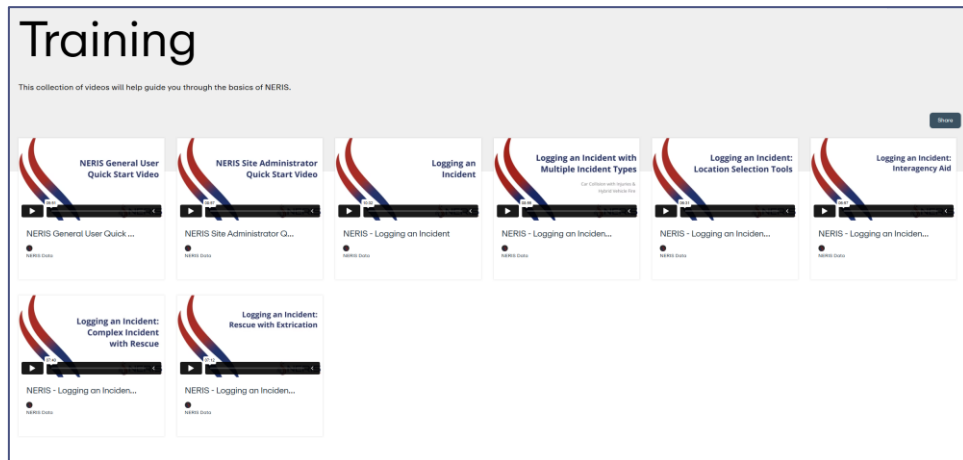
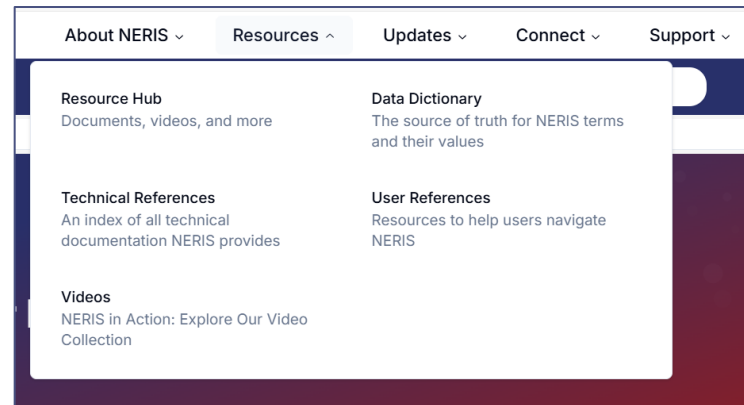


After You Log In Successfully...

1. Review the Training Videos and Guides
2. Setup the department node/profile that includes information on:
 - i. Contact Information and Address of the Headquarters
 - ii. Jurisdiction, Services, Shifts, and Staffing
 - iii. Dispatch Center Protocols and Software
 - iv. ISO and Accreditation

Training and Education

- Short Videos
- User Guides
- Technical References
- Data Dictionary (Term Definitions)
- Frequently Asked Questions
- GIS boundaries (Service Areas)



After You Log In Successfully...

3. Stations and Apparatus Setup

- i. Units that are unstaffed can have a minimum staffing of zero.
 - ii. Units that are staffed by volunteers should show the minimum staffing for when that unit responds to an emergency.
 - iii. Unit type and categorization – align with FEMA and the National Wildland Coordinating Group
- Questions? Email Helpdesk**

4. Determine your plan for incident submission into NERIS

- Third-Party RMS → Enter the Client ID of the RMS System
- Using the NERIS Incident Data Collection App (free) → Feature must be activated through the NERIS Helpdesk

[illegible]

Integration Enrollment Confirmation

Are you sure you want to enroll in this integration?

This will grant access to your entity's data and allow the integration to:

- View, create, and modify incident data for my entity.
- View and modify the attributes of my entity (location, stations, staffing, units, etc).

Cancel

Enroll



Logging an Incident





NERIS Ready: 2025



Project Manager



- Establish a primary person of contact who has details on the operation and demographics of the department, including unit information, station addresses, minimum staffing and department attributes like ISO rating, accreditation status, etc.



GIS and RMS Integration



- Obtain boundary and response area GIS layers in a *shapefile* format, which is usually a zip file. These can oftentimes be found in city, county or state GIS offices (or your 9-1-1 center).
- If you're connecting via a third-party Records Management System (RMS), obtain your vendor's client ID and input it into your NERIS node as an integration.



Training and Orientation



- Share webinar and training videos from the NERIS website with your department to increase baseline knowledge of data importance and the NERIS project.
- Reach out to neighboring departments to make sure they're attentive.





Thank you.



FAQS: [HTTPS://WWW.USFA.FEMA.GOV/NFIRS/NERIS/ABOUT-NERIS](https://www.usfa.fema.gov/nfirs/neris/about-neris)



WEBSITE: [HTTPS://FSRI.ORG/PROGRAMS/NERIS](https://fsri.org/programs/neris)



CONTACT US: NERIS@UL.ORG

