

A photograph of firefighters at night in a wooded area. In the center, a drone is illuminated with red, white, and blue lights. A firefighter in the foreground is wearing a helmet and a vest with an American flag patch. Another firefighter is visible in the background on the right, holding a tablet. The scene is lit with a mix of warm and cool tones.

# Oregon Public Safety UAS (Drone) Update

Prepared for the Joint Committee on Transportation 5/31/2024

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# Law Enforcement

## Use Cases

- Active Threat Response
- Tactical
- Crime Scene Documentation
- Fatal Crash Reconstruction
- Chases
- Barricaded Subjects
- Threat De-Escalation
- Payload Delivery



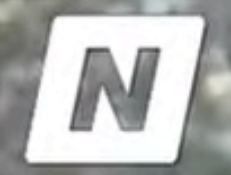




00:01

Motors starting...

Aircraft in low-power state



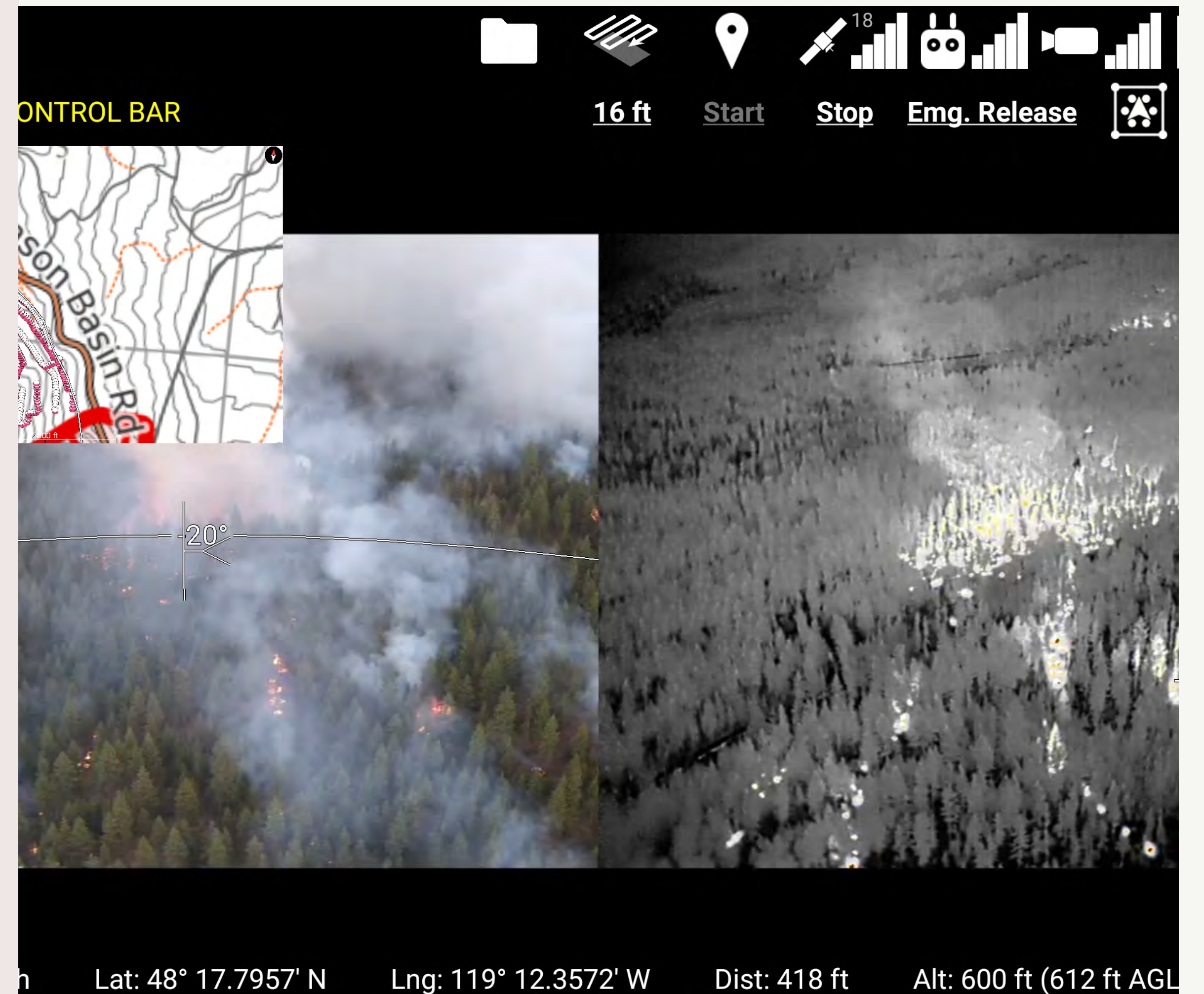
0.0mph      0.0mph  
H 0.0ft      D 6.2ft

96 00'00" RC HD 5 Mbps 17 77%

# Fire Service

## Use Cases

- Hazardous Materials Response
- Pre Fire Planning
- Fire Investigations
- Swiftwater / Rope Rescue
- Situational Awareness On Fires
- Mapping
- Aerial Ignition
- Payload Delivery
- Damage Assessment





# Search & Rescue

## Use Cases

- Locating Lost Persons
- Locating Objects of Interest
- Guiding Rescuers to Location
- Mapping
- Payload Delivery
- Situational Awareness





# Payload Delivery

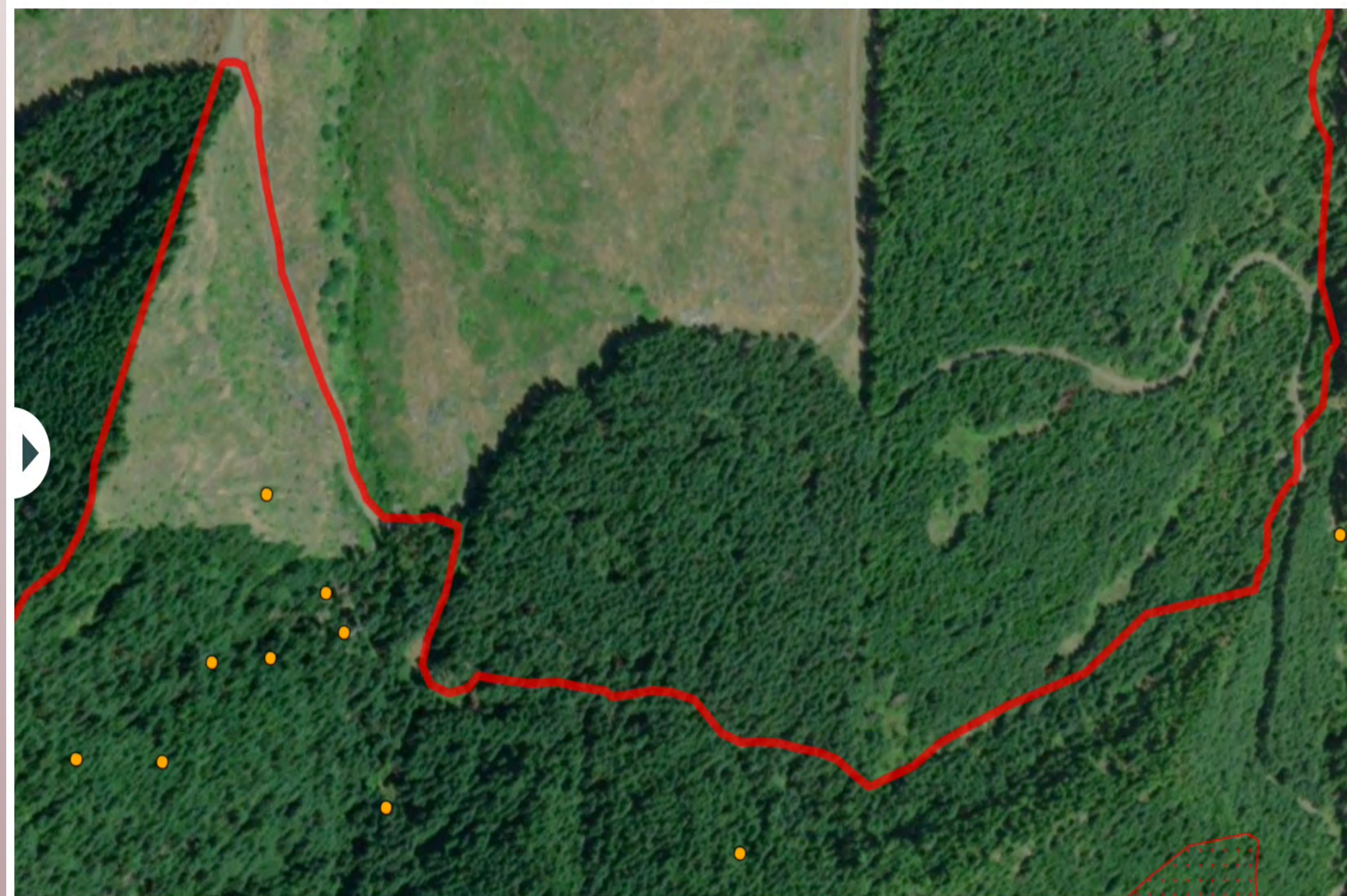




# Wildland Fire UAS Aerial Mapping

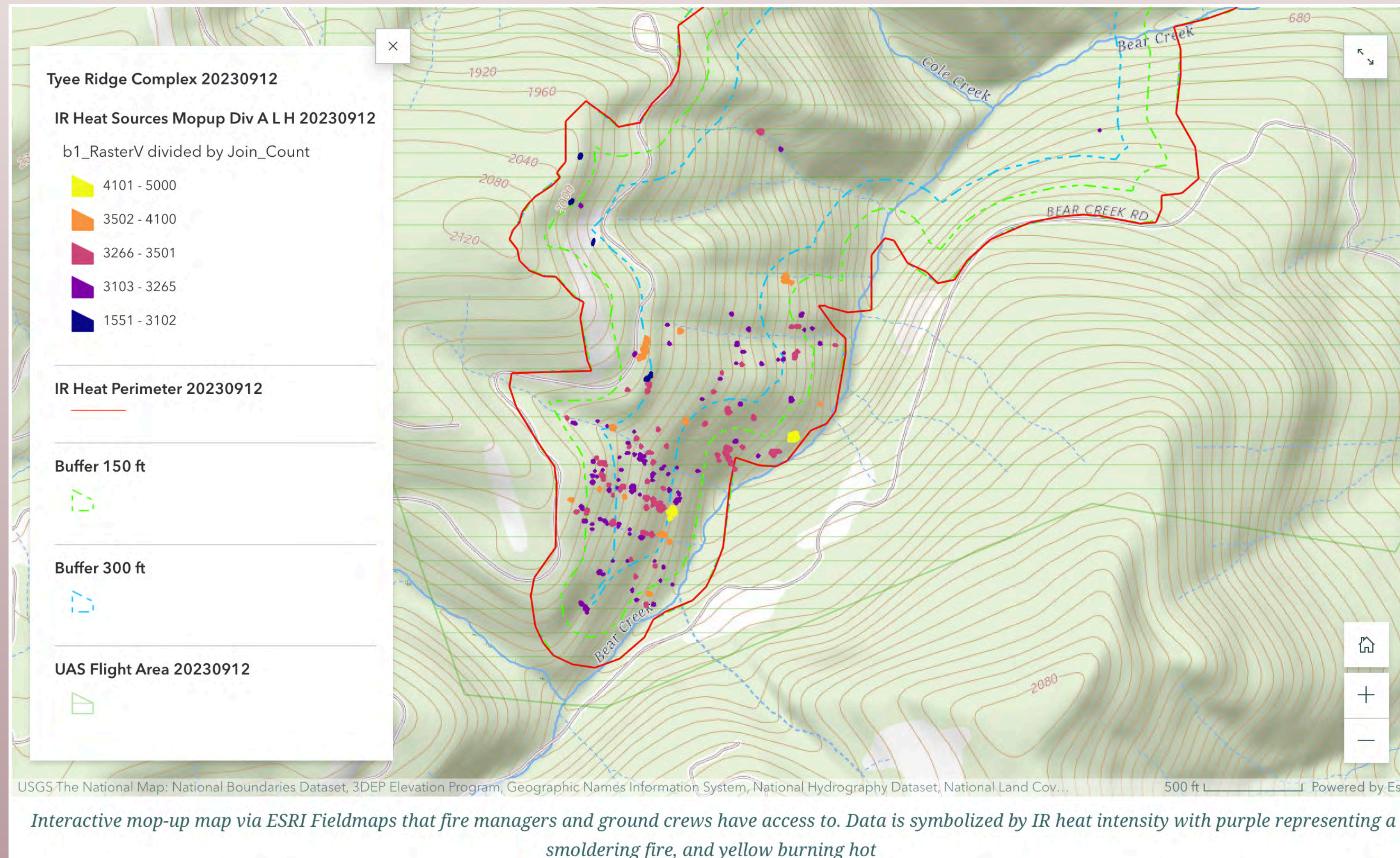
- UAS is being used for near real time accurate Infra Red (IR) mapping
- This reduces exposure to the firefighters
- Identifies hazardous conditions
- Enhances effectiveness of firefighting and mop-up operations
- Interactive IR (Thermal) using ArcGIS Fieldmaps, StoryMaps and Dashboards

# Mapping - UAS vs NIROPS (National Infrared Operations)



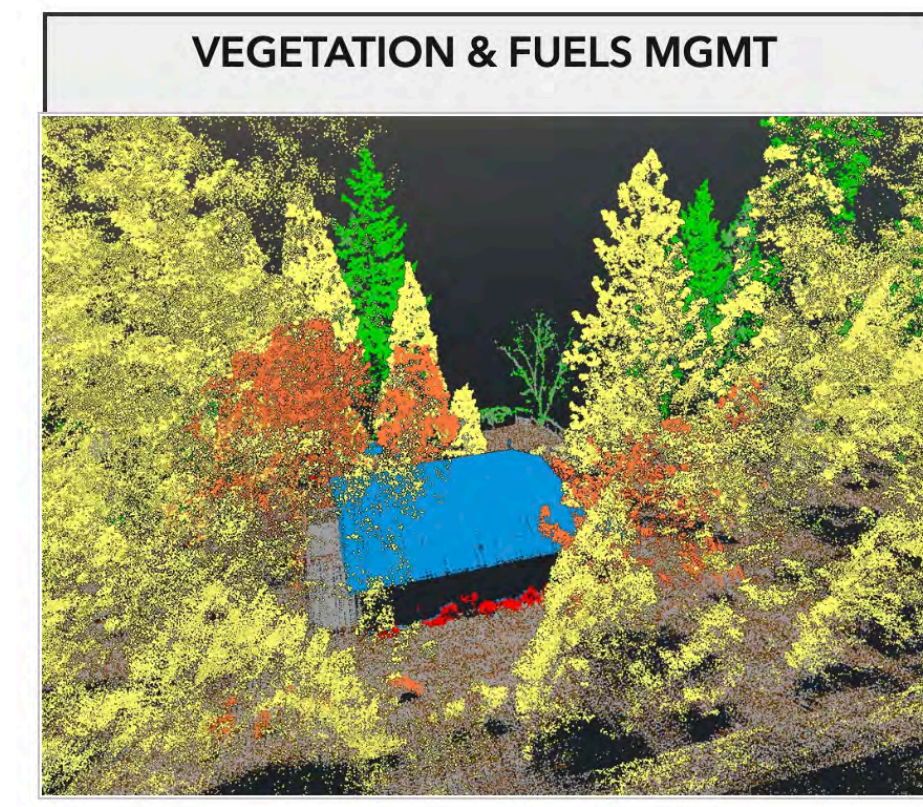
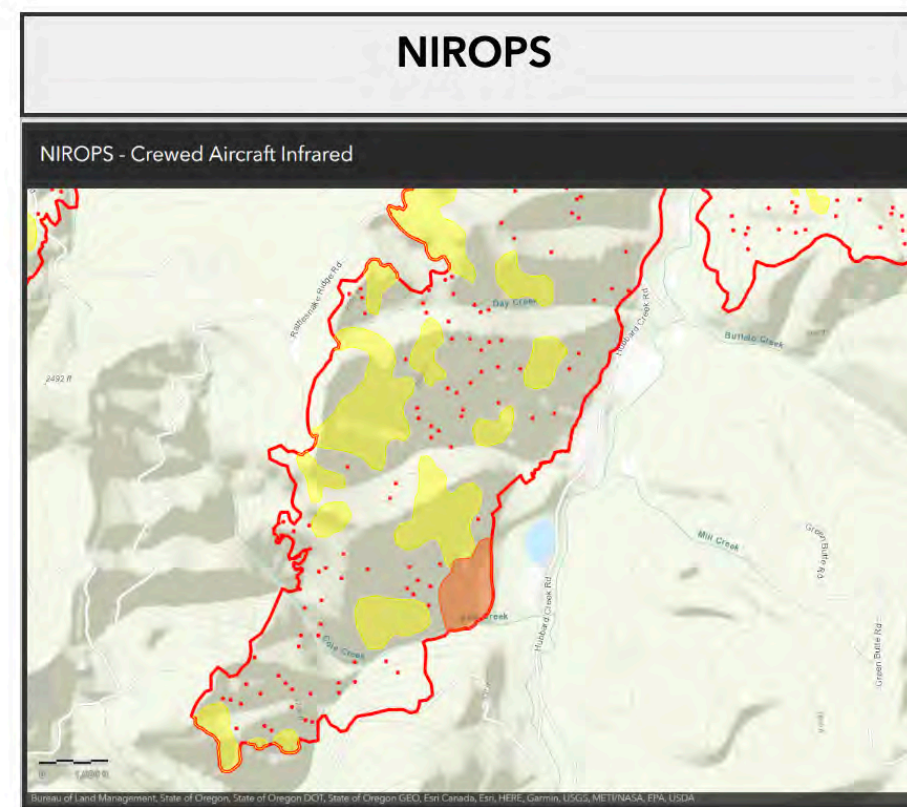
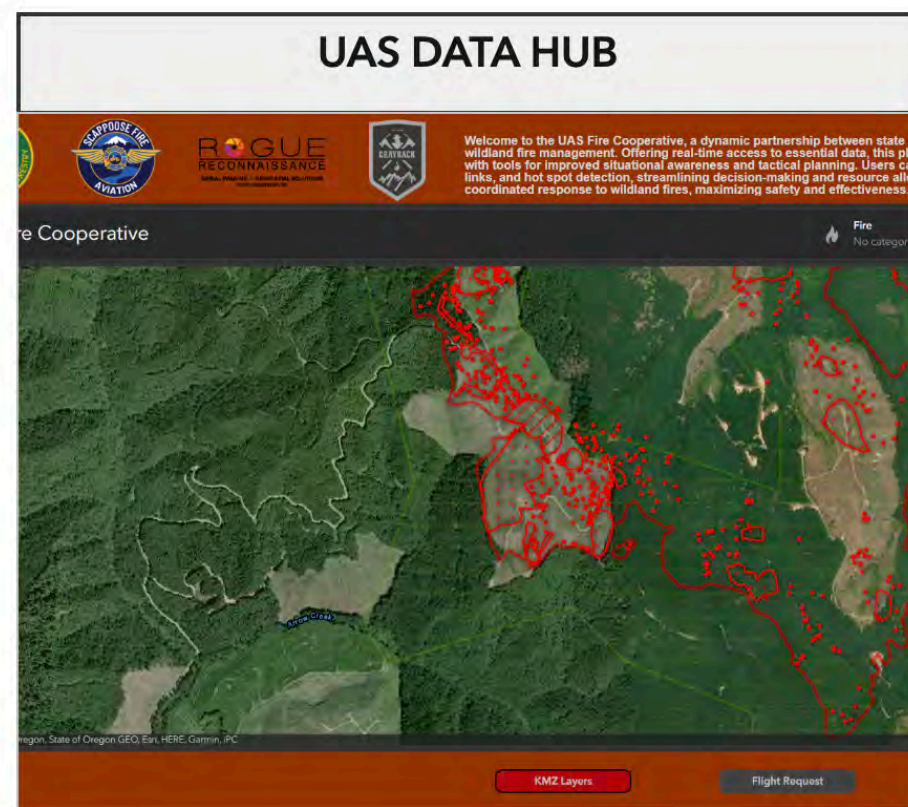
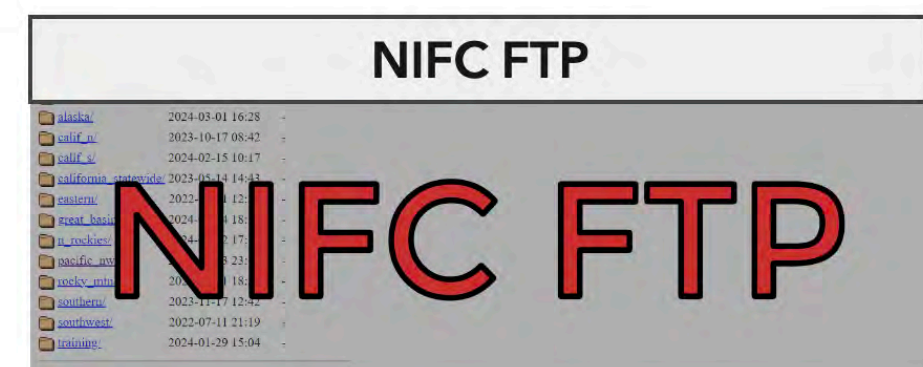
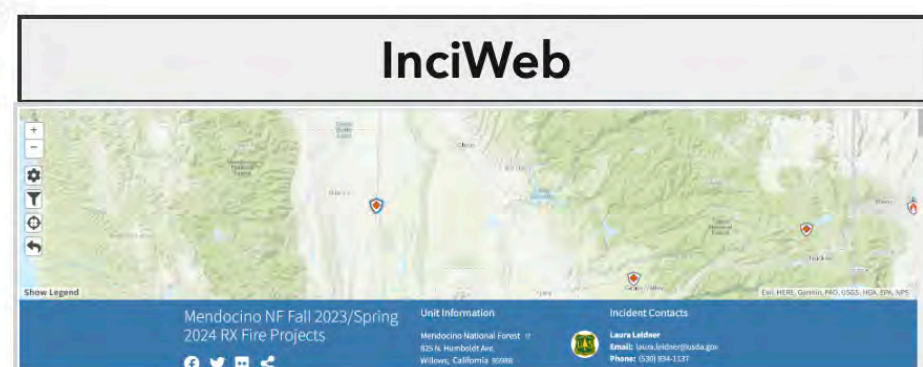
*Swipe right for UAS IR (red), and swipe left to see NIROPS (orange). Both datasets were collected the same night*

# UAS Mapping – Harnessing the data for mop-up



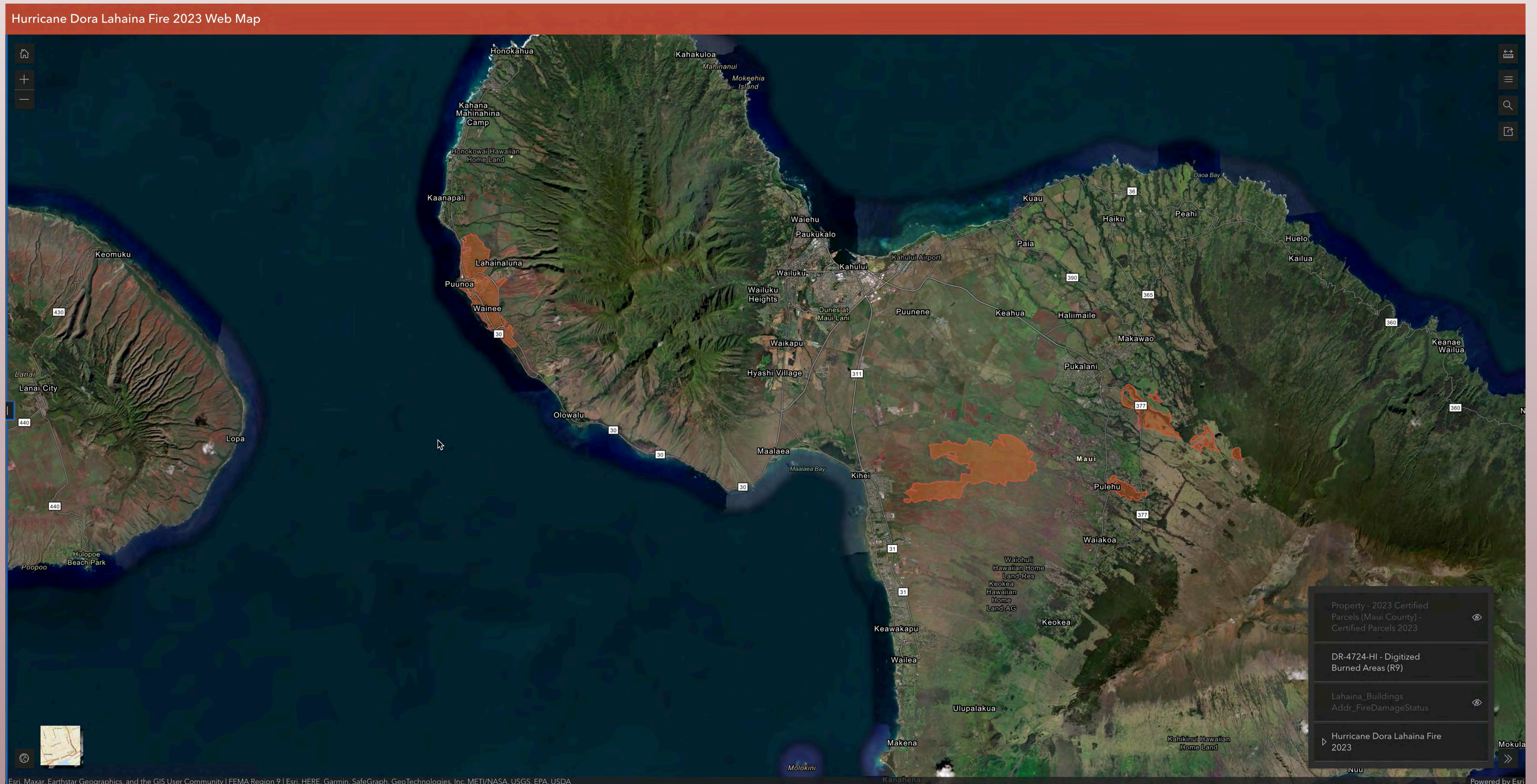


# UAS WILDLAND FIRE COOPERATIVE Resources & Dashboards



- Surveys
- IGNITIONS
- UAS IR
- FLIGHT REQUEST FORM

# UAS Mapping – GIS Integration



# UAS Mapping – GIS Integration

Hurricane Dora Lahaina Fire 2023 Web Map





# The UAS Before The Pilot

- Progression not appropriately sized yet for UAS
- UAS readily accessible
- Lack of aviation culture
- Access has caused a few missteps



# Challenges

- Oregon Revised Statutes
- Lack of ability to neutralize unwanted UAS
- Barriers that are preventing innovation
- Lack of pilot standards
- Lack of training standards
- UAS as a collateral duty

# The Future

- DFR (Drone as a First Responder)
- Beyond Visual Line of Sight
- UAS (aka Drone) Detection
- Regional UAS teams
- STEM / Workforce development
- Medical Response

# What We Need

- When considering new UAS legislation please Include partner entities (OFCA, LEDA, Robotics Work Group, OSSA, OACP, AUVSI, ODOT, SARC, ODF, SFMO)
- Stay away from country of origin bans (Focus on safety first)
- Funding and grants to invest and modernize these tools for public safety (Ex: SB762, HB 2687)
- Continue to support State Homeland Security grant program
- Encourage and incentivize collaborations between state and local entities
- Reduce the cylinders of excellence (AKA silos)
- Pathway for better collaboration between Oregon National Guard and local responders

# STEM / WORKFORCE DEVELOPMENT FOR SCHOOLS





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