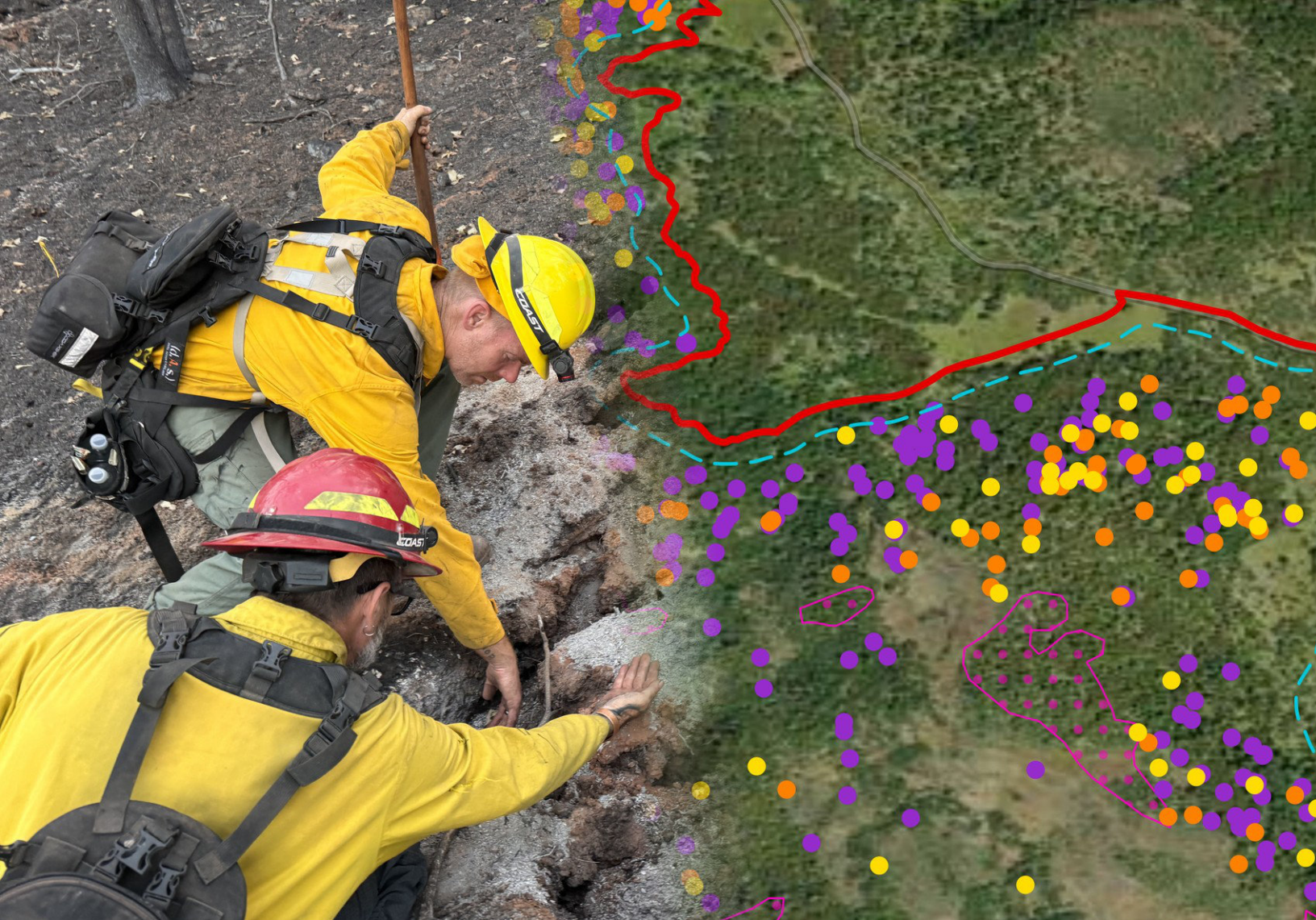




## CAPABILITY STATEMENT

GRIDDING FOR HEAT BY HAND, FIELDER MOUNTAIN, 19 AUG 2026  
EAST EVANS CREEK DIV X SOUTH, UAS IR HEAT SOURCES, 23 JULY 2026

# Eli Polsky

Wildland fire mapping and mitigation.  
Fourteen years in fire, ten of them flying it.

### Rogue Reconnaissance LLC

UAS remote sensing  
Medford, Oregon

### Hawaii Mapping

Utility vegetation and LiDAR  
Hawaii Island

### UAS Wildland Fire Collaborative

501(c)(3)  
Founder, Executive Director

## WHO YOU ARE TALKING TO

# A firefighter who builds the mapping.

**14**

YEARS IN WILDLAND FIRE

**22**

NAMED INCIDENTS MAPPED,  
2023–2026

**21 days**

LONGEST SINGLE  
ASSIGNMENT, THREE FIRES  
AT ONCE

**2019**

ODF CALL WHEN NEEDED  
RESOURCE SINCE

This work comes from the fire side, not the technology side. That is the whole difference in how it comes out.

I started in wildland fire in 2012 and carry FFT1, GISS, and UASD as an Administratively Determined resource with the Forest Service. Rogue Reconnaissance has flown UAS on prescribed fire since 2016 and has been a Call When Needed UAS resource for the Oregon Department of Forestry since 2019, flying night infrared on active incidents under resource order, with ODF's contractor performance rating of **Exceptional** on file. The aircraft is typed UAR4, Unmanned Aircraft, Rotor Wing, Type 4.

The rest of the year is the other half of the problem. Drone LiDAR and multispectral for fuels, canopy structure, ladder fuels, tree species and health, community wildfire protection planning, and utility corridor risk. Same aircraft, same sensors, same analysis stack. Suppression and mitigation are one body of work and we run both.

What we bring that most vendors do not is the software. We build the pipelines that turn collection into an agency ready product without a person in the middle. A pilot's raw thermal export becomes a complete incident deliverable package in about five minutes. That is not a side interest. It is most of what happens between fires.

### FIRE QUALIFICATIONS

- FFT1, Advanced Firefighter and Squad Boss
- GISS, GIS Specialist
- UASD, UAS Data Specialist
- Administratively Determined, US Forest Service
- Call When Needed UAS resource, Oregon Dept. of Forestry

### AVIATION

- FAA Part 107, certificated November 2016
- Certificate of Authorization holder, Class D and Class E2
- TFR operations under 14 CFR 91.137
- ARTCC and incident air operations coordination

BS Environmental Studies, Land Use Planning.  
Minor in Geography. Southern Oregon University.

## THREE ENTITIES, THREE WAYS TO WORK WITH THE SAME OPERATOR

### UAS Wildland Fire Collaborative

#### THE CONTRACTING VEHICLE: NONPROFIT

501(c)(3), SAM registered. Cooperative agreements, grants, shared funding. Deliverables free to agencies.

UEI **MCQVVQLW6EC4**

EIN **42-2344101**

### Rogue Reconnaissance LLC

#### THE COMMERCIAL PRACTICE: FIRE

Fire IR, LiDAR, multispectral, GIS. Small business, contracts and subcontracts directly.

UEI **RUE6PBWSLAN6**

CAGE **9DDE5**

### Hawaii Mapping

#### THE COMMERCIAL PRACTICE: HAWAII

High Road Solutions LLC. Utility vegetation, corridor LiDAR, field data.

UEI **P2SHL3HMYU6**

CAGE **9LJS6**



## Two halves of the same problem, worked by the same operator.

### In season. Suppression support.

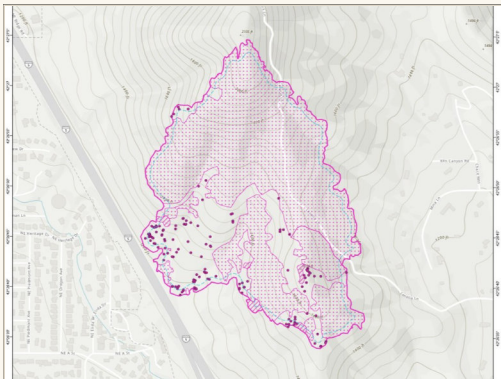
Night thermal infrared on active incidents. We launch after the aircraft leave for the night, map the division, and put a heat perimeter, intensity classed hotspots, and a flight summary in the GISS's hands before the morning briefing. Products land in the formats the incident already uses, aligned to NIFS schema and carrying the IRWIN identifier, so nobody reprojects or retypes anything at 0500.

- Heat perimeter, intense and scattered heat, isolated heat points
- Intensity classification, high, medium, and low
- Mopup buffers and area covered by flight
- Aerial ignition documentation and launch and recovery points
- Templated 11x17 map products, ortho and topo pairs
- Shapefile, KMZ, file geodatabase, GeoTIFF, hosted feature service

### Off season. Mitigation and planning.

Drone LiDAR and multispectral for the work that decides how the next fire behaves. Bare earth terrain under canopy, canopy height, ladder fuel identification, individual tree detection, species and health classification, and corridor clearance analysis. Delivered as classified point clouds to ASPRS classes, raster products, and hosted viewers a field crew can actually open on a tablet.

- Classified point cloud, bare earth DEM, DSM, canopy height model
- Individual tree detection, crown delineation, species classification
- Live and dead assessment, ladder fuels, downed woody debris
- Community Wildfire Protection Plan mapping and vegetation buffer analysis
- Utility corridor clearance and encroachment analysis
- Prescribed fire support, including ignition operations



I-5 Grants Pass incident, first night, August 2026. Initial attack off the interstate: heat perimeter, intense and scattered heat, and a 50 ft mopup buffer, 96 acres interpreted.

### AIRCRAFT, NDAA POSITION, AND HOW THIS GETS CONTRACTED

**Freefly Astro with YellowScan Mapper+.** United States manufactured and NDAA compliant. This is what we fly for non fire missions on federal ground, and what flew the BLM Ukiah mine mapping.

**DJI M300 RTK with Zenmuse H20T, XT, and P1.** The fire aircraft, operating under the 2024 NDAA wildland fire and search and rescue exception carried forward in OPM-11.

We can deliver as an **end product** under OPM-35 and OPM-11 Appendix 2, where the procurement buys the data rather than flight hours. Or as **flight services** under operational control, with OAS-30U pilot and OAS-36U aircraft carding. Or through a **cooperative agreement** with the nonprofit, where the deliverables carry no program cost at all.

Whichever route a unit already uses, we can meet it.

# Rogue Reconnaissance LLC

UAS remote sensing and geospatial analysis · Medford, Oregon · Founded 2016 · roguerecon.net



## CORE COMPETENCIES

Wildland fire infrared mapping on active incidents. Drone LiDAR and multispectral collection and analysis for forestry, fuels, and terrain. Point cloud classification to ASPRS standard classes. Individual tree detection, crown delineation, and machine learning species classification validated with published accuracy. GIS development, arcpy and ArcGIS Python API automation, hosted service administration, and production data pipelines.

## DIFFERENTIATORS

- The operator is a credentialed wildland firefighter with GISS and UASD qualifications, not a contractor who learned fire from a manual.
- Full pipeline ownership from flight planning through sensor calibration, classification, statistical modeling, and final report layout. No handoff to a processing vendor.
- Species classification carried past canopy delineation into validated models with reported accuracy and confusion matrices, not visual interpretation.
- Products delivered on operational timelines. A night IR flight becomes a map product in an incident team's hands before the morning briefing.

## PAST PERFORMANCE

**BLM Ukiah Field Office** Drone LiDAR over ten abandoned mine sites, 778 acres, in support of Bat Conservation International. Terrain, surface, and canopy models at 0.25 m. Northern California, 2025.

**Oregon Dept. of Forestry** Call When Needed UAS infrared resource under agreement ODF-UASCWN. Night IR on active incidents, 2024 to present. Also post harvest downed woody debris assessment.

**City of Eugene** Oregon ash inventory ahead of emerald ash borer. 390 acres across 13 areas. Contract 2025-05415. 2025 to 2026.

**City of Ashland** Citywide drone LiDAR for the Community Wildfire Protection Plan. Terrain, canopy, ladder fuels, vegetation buffers. 2024 to 2025.

**Private forestry** Douglas fir live and dead assessment across roughly 1,000 acres. Per tree reporting that directed helicopter logging operations.

**US Forest Service** Administratively Determined resource supporting fire operations and geospatial functions.

## REGISTRATION

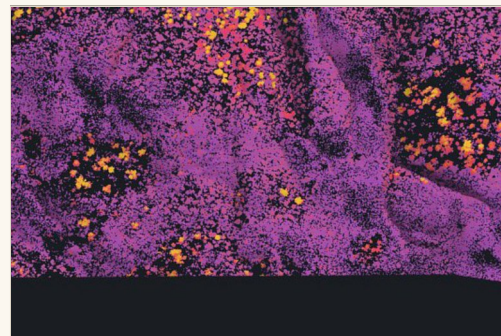
UEI **RUE6PBWSLAN6**  
CAGE **9DDE5**  
SAM **Registered and active**  
ENTITY **Oregon LLC, sole member**  
SIZE **Small business**

## NAICS

**541370** Surveying and Mapping Services, primary · 541360 · 541620 · 541690 · 541511 · 115310

## AIRCRAFT AND SENSORS

- Freely Astro, NDAA compliant
- DJI Matrice 300 RTK
- YellowScan Mapper+ LiDAR
- Inertial Labs RESEPI, Hesai XT32
- MicaSense RedEdge MX, 5 band
- DJI Zenmuse H20T, XT, P1
- Emlid RS3 GNSS base



Canopy height, Harley Gulch, the largest of the ten BLM sites at 580 acres. Individual crown structure against low chaparral.

## CAPABILITY STATEMENT

# Hawaii Mapping

High Road Solutions LLC dba Hawaii Mapping · Utility vegetation management, LiDAR, GIS programs · Hawaii Island · hawaiiimapping.com



## CORE COMPETENCIES

Running a utility vegetation management data program end to end, from field collection standards through regulator ready reporting. Survey123 form design and crew deployment, nightly automated processing, ArcGIS Online dashboards, scheduled and on demand reporting. Corridor LiDAR for wildfire mitigation, including conductor and vegetation classification and three dimensional clearance analysis.

## THE ANCHOR PROGRAM

We built and operate the geospatial hub for Hawaiian Electric's vegetation management program on Hawaii Island, working directly with the utility's Vice President of Vegetation Management and presenting methodology and results to utility leadership. Collection standards are built to survive audit and Public Utilities Commission review.

**38,587**

TREES WORKED,  
2025

**4.07M**

SQ FT BRUSH  
CLEARED

**60+**

CORRIDOR  
MILES FLOWN

**2,067**

LINE MILES IN  
THE METHOD

## WHY IT MATTERS TO A FIRE PROGRAM

This is fire mitigation with a compliance obligation attached. The corridor LiDAR classifies conductors and vegetation as separate layers, generates three dimensional clearance buffers twelve feet from every line, and flags anything growing inside one. Encroachment becomes data instead of a hunch, and crews open a map that tells them what to cut rather than walking the line looking for it. The same machinery that satisfies a utility commission satisfies a federal reporting requirement.

## PAST PERFORMANCE

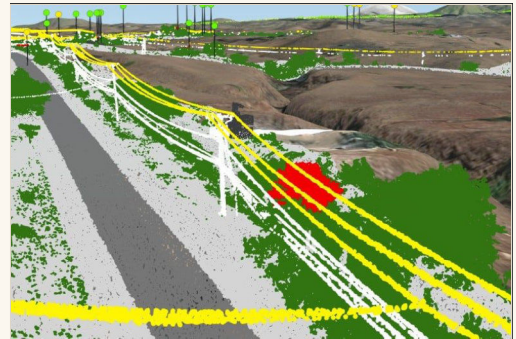
|                                    |                                                                                                                                                    |
|------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hawaiian Electric</b>           | Island wide vegetation management data program and corridor LiDAR for wildfire mitigation. Ongoing.                                                |
| <b>Big Island Tree Service</b>     | Field collection partner on the utility program. Survey123 design, tablet deployment, crew training, and daily field support.                      |
| <b>Landowners and civil design</b> | Drone LiDAR terrain products under dense strawberry guava canopy, where ground collection is impractical. Contours, bare earth, hosted 3D viewers. |
| <b>Conservation and county</b>     | Invasive species remote sensing and community mapping.                                                                                             |

## REGISTRATION

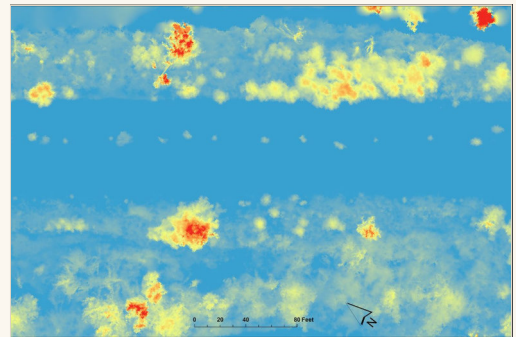
|       |                                        |
|-------|----------------------------------------|
| UEI   | <b>P2SHL3HMWYU6</b>                    |
| CAGE  | <b>9LJS6</b>                           |
| SAM   | <b>Registered and active</b>           |
| LEGAL | <b>High Road Solutions LLC</b>         |
| OWNER | <b>Eli Polsky, sole owner</b>          |
| BASE  | <b>Hawaii Island, statewide Hawaii</b> |

## NAICS

**541370** Surveying and Mapping Services, primary ·  
541360 · 541620 · 541690 · 541511 · 115310



Corridor clearance viewer. Conductors, 12 ft buffers, and flagged encroachment in 3D against real terrain. Opened on a tablet in the field.



Corridor canopy structure from the classified cloud. Height drives the clearance call.

# UAS Wildland Fire Collaborative

Oregon nonprofit public benefit corporation · Recognized 501(c)(3) · uaswfc.org



## WHAT IT IS

A standardized pipeline for UAS wildland fire data. A pilot flies a thermal sensor over an incident and submits raw data through one form. The pipeline orthorectifies, classifies heat, and produces conformant deliverables. The pilot reviews and approves by email. The package reaches the incident management team in the formats they already use, carrying the pilot's own branding. Pilots keep ownership of their data.

**Every deliverable is free to the receiving agency.**

It is a tool, not a fire resource. It is built for any wildland fire drone pilot, whether they fly for a state agency, a private contractor, or a federal agency, in any state. One pipeline and one standard, so every pilot on a fire hands the incident the same packet.

## STANDARDS ALIGNMENT

Output conforms to the NIFS schema and carries IRWIN identifiers, IRPolygon and IRPoint geometry, FeatureStatus, and collection timestamps. Distribution runs to NIFC FTP, hosted feature services, Intterra, and direct delivery to the receiving team. On the Fossil Complex the same layer carried both UAS collection and the crewed infrared perimeter flown by N115Z, which is the interoperability the standard exists to produce.

## ADOPTION

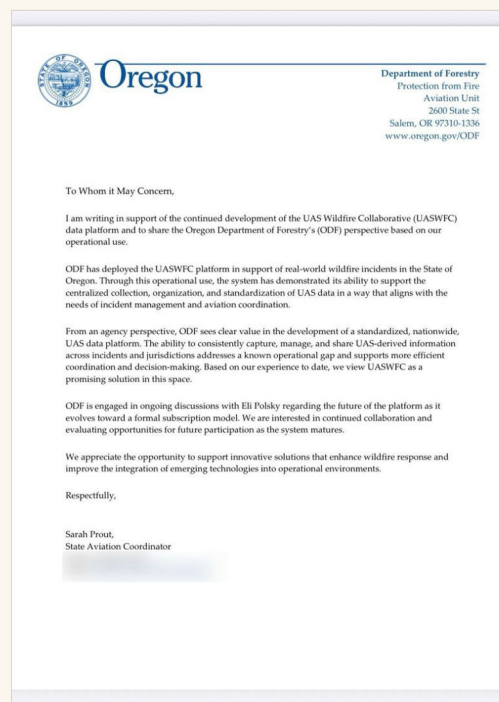
- **Oregon Department of Forestry is the anchor agency partner**, deploying the platform operationally across the 2024, 2025, and 2026 fire seasons and routing its own pilots and cooperators through it.
- Cooperating pilots and organizations including Scappoose Fire District, Grayback Forestry, Hummingbird Drones, and Rogue Reconnaissance.
- Commercial processing vendors NOVA Software and Hummingbird Drones produce conformant output voluntarily. A commercial peer adopting the standard by choice is the proof it functions as a neutral interoperability layer rather than one vendor's product.
- Selected for the Oregon UAS Innovation Challenge, Cohort 3, in 2025.

*"The system has demonstrated its ability to support the centralized collection, organization, and standardization of UAS data in a way that aligns with the needs of incident management and aviation coordination."*

SARAH PROUT · STATE AVIATION COORDINATOR · OREGON DEPARTMENT OF FORESTRY

## REGISTRATION

|        |                                                |
|--------|------------------------------------------------|
| UEI    | <b>MCQVVQLW6EC4</b>                            |
| EIN    | <b>42-2344101</b>                              |
| IRS    | <b>Recognized 501(c)(3) public charity</b>     |
| FORMED | <b>May 5, 2026, Oregon</b>                     |
| SAM    | <b>Registered, financial assistance awards</b> |
| NAICS  | <b>541370</b>                                  |



Letter of support, Oregon Department of Forestry. ODF describes the system as addressing a known operational gap and a promising solution for standardizing UAS fire data nationwide. Contact details redacted.

## BOARD

**Eli Polsky**, Founder and Executive Director. **Jeff Pricher**, Fire Chief, member of the NWCG UAS Subcommittee. **Nikki Hart-Brinkley**, GIS advisor and Esri affiliate. Directors serve individually and do not bind any employer or agency.



## What a night actually looks like.

When the aircraft leave the incident for the night, we go to work. That is when the fire tells you the truth about where it is.

We take the resource order and coordinate with air operations, the IC, division supervisors, task force leaders, and the ground resources before dark. TFR deconfliction is sorted with the ARTCC, and launch and recovery goes in as a point so the next shift knows where the site is. Flying at night is safer, the airspace is quiet, and heat signatures read cleaner. Then we grid the division with a radiometric thermal sensor and fly it as a mapping mission rather than a look.

The imagery becomes an orthorectified IR GeoTIFF, and heat is classified from measured temperature, so a warm stump does not get called a hotspot and a real one does not get missed.

Then the package builds itself, in about five minutes. Heat perimeter, intensity classed heat, isolated heat points at high, medium, and low, mopup buffers, area covered. Templated 11x17 map products in ortho and topo. Shapefiles, KMZ, file geodatabase, GeoTIFF ortho, and a flight summary that documents the collection. It goes to the incident in the formats the GISS is already working in, the same night.

**The point of all of it is the last mile.** Not the map. The crew that gets sent to the right corner of the division at 0700 because somebody put the heat on a screen at 0300.



Flight planning before dark, I-5 MM 57 NB, 1 August 2026. Initial attack, and the incident's first perimeter product came off this tailgate.



Launch and recovery, East Evans Creek, 30 July 2026. The point goes in the layer so the next shift knows where the site is.

### Radiometric, not visual

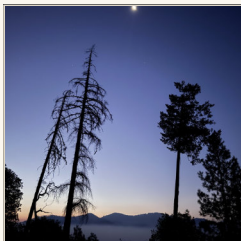
Every camera in the fleet records calibrated temperature per pixel. Thresholds are set in degrees against measured values, so a heat call is defensible rather than an interpretation of a color ramp.

### Heat calls that hold up

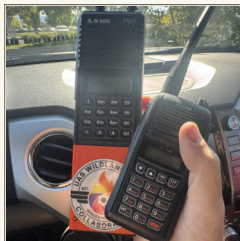
Every heat source is classified against measured temperature with noise rejected, and every run writes a QA report next to the geodatabase so the numbers can be checked later.

### NIFS standardized data

Features follow the NIFS standard and carry the IRWIN identifier and collection timestamps. The GISS drops it straight in. Nobody reprojects or retypes anything at 0500.



Inversion over Woodrat Mountain, 7 Aug 2026



Tactical and air to air, both monitored

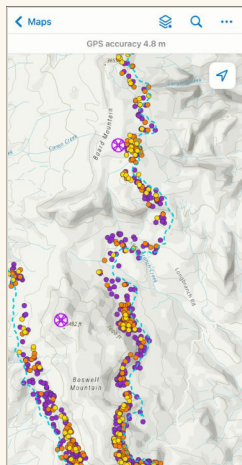
### AIRSPACE FIRST, EVERY TIME

The aircraft working the fire in daylight are the reason we fly at night, and the reason the first call of a shift is to air operations. We carry the incident tactical frequency and the air to air frequency, deconflict with the ARTCC, and operate inside the TFR under 14 CFR 91.137 rather than around it.

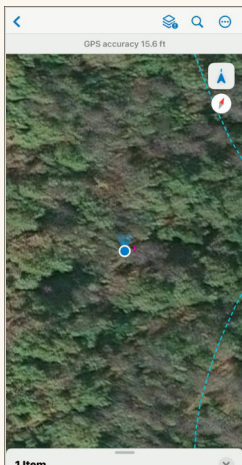
Smoke and inversion ground most aircraft. We can usually see through the inversion or fly under it, so the mapping still happens on the nights other platforms cannot fly at all.

## What the crew does with it.

The map is not the product. A firefighter walking to a coordinate at 0700 and putting a hand in the ash is the product. Everything on the previous page exists to make that walk shorter.



Classified heat across the division, East Evans Creek



Navigating to one, with GPS accuracy on screen

### THE HANDOFF THAT ACTUALLY MATTERS

The hosted layer goes straight into Field Maps. A crew opens it on a phone, sees every classified heat source and the mopup buffer, and navigates to the one in front of them. We can assist night resources in real time, and most products go to the day shift, in hand by 0500 or whatever time works best for ops.

We classify heat as high, medium, or low intensity, and separately as **possible** heat, which is the honest label for a return that looks warm but has not been confirmed. That distinction is the reason the product survives contact with the ground. A crew is told what is certain and what needs eyes on it, rather than being handed a single undifferentiated pile of dots.

What comes back from the ground is what keeps the thresholds honest. Confirmed heat validates the call. A rejected point tells us the threshold or the interpretation needs work on that fire, that night, in that fuel type.

### Confirmed on the ground



Burning madrone base, Fielder Mountain, 19 Aug



Stump hole hidden in timber, I-5, 4 Aug

Mapped from the air, found on foot. Both of these were points on a screen before anyone walked to them.

### Checked and ruled out

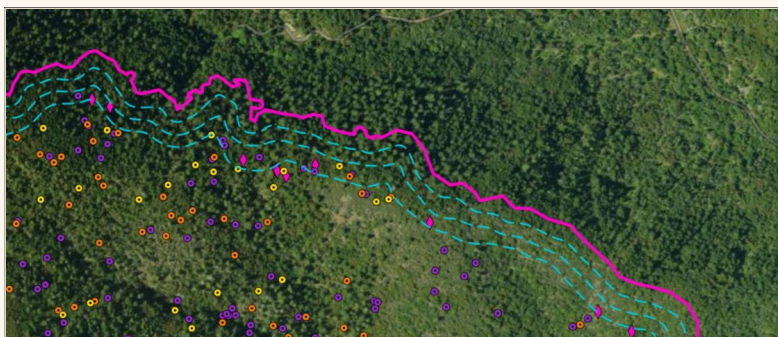


Sun warmed rock, Fielder Mountain, 20 Aug



Excavator engine, Fielder Mountain, 20 Aug

Both flagged as possible heat, both walked, both ruled out. A thermal sensor sees temperature, not combustion. Saying so is what makes the rest of the layer trustworthy.



Intensity classes and the mopup buffer drawn in the viewer the incident opens.

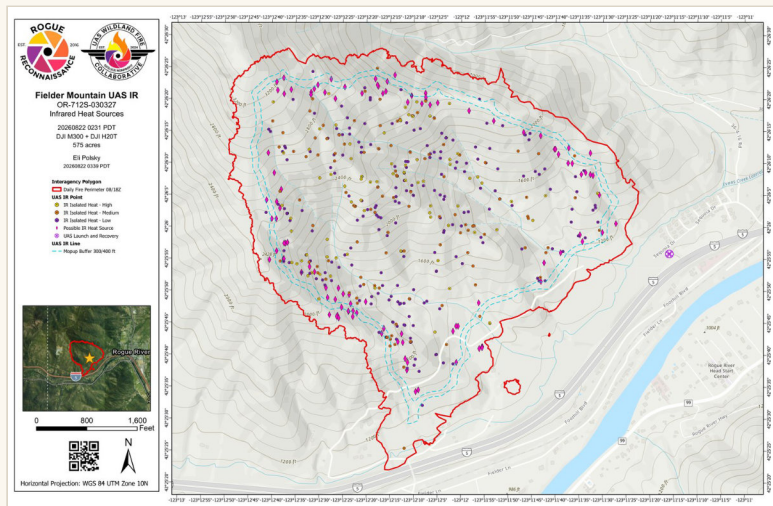
### THE BUFFER IS THE ASSIGNMENT

Heat inside a perimeter is information. Heat inside a **mopup buffer** is a task. The IC and operations set the buffer they are working to, 100, 300 or 400 feet off the line depending on the fire, and we generate it to match their resources and objectives, so a division supervisor can see what has to be cold before the line is called secure. That single line turns a scatter of points into a defined piece of work with an edge on it.



## FIRE MAPPING

# The package, every time, in the same shapes.



The 11x17 as it ships. Fieldier Mountain, 22 August 2026, mid incident: heat perimeter, classified heat sources, mopup buffer, both operator logos, scale, and the QR to the live data.

## WHAT SHIPS

|               |                                                                                                                             |
|---------------|-----------------------------------------------------------------------------------------------------------------------------|
| Map products  | Templated 11x17, portrait or landscape, aerial and topo pairs. Agency co branding, operator logo, QR to the live data.      |
| Vector        | Shapefile set and zipped file geodatabase. NIFS field names, IRWIN identifier, FeatureStatus, collection timestamps, WGS84. |
| Field         | KMZ for Avenza and Google Earth, sized for a phone in a truck.                                                              |
| Raster        | Orthorectified IR GeoTIFF mosaic.                                                                                           |
| Live          | Hosted feature service for direct IMT and Intterra consumption, updated as each submission is approved.                     |
| Documentation | UAS IR flight summary recording aircraft, sensor, pilot, times, coverage, interpreted size, and method.                     |

| UAS INFRARED DAILY LOG                                                                                                                                                                                                                                                                                                       |                                                               |                                                                                                                                         |                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| UAS Wildland Fire Collaborative                                                                                                                                                                                                                                                                                              |                                                               |                                                                                                                                         |                                                                                     |
|                                                                                                                                                                                                                                            |                                                               |                                                                                                                                         |  |
| Incident Name:<br>Fieldier Mountain UAS IR<br>OR-7125-030327                                                                                                                                                                                                                                                                 | UAS Data Specialist(s):<br>Eli Polsky<br>eli@roguefirecon.net | Local Dispatch Phone:<br>541-664-3328                                                                                                   | Interpreted Size:<br>575 ac                                                         |
| Flight Time:<br>0138 PDT                                                                                                                                                                                                                                                                                                     | UASD Location:<br>Medford, Oregon                             | UASWFC Coordinator:<br>Cole Lindsay                                                                                                     | Agency POC:                                                                         |
| Flight Date:<br>8/27/2026                                                                                                                                                                                                                                                                                                    | UASD Phone:<br>808-298-6290                                   | UASWFC Coordinator Phone:<br>N/A                                                                                                        | Agency POC Phone:<br>N/A                                                            |
| Ordered By:<br>Oregon Department of Forestry                                                                                                                                                                                                                                                                                 | FAA Part 107 #:<br>UR43                                       | Aircraft / Sensor:<br>DJI M300 + DJI H20T                                                                                               | UAS Pilot(s) / Crew:<br>Mike Mastrofini (UASP)                                      |
| UASD Comments on Imagery:<br>Clear IR heat signatures observed with little possible heat. Same possible heat signature on the north end of the fire showing a stronger signature. Few other very faint signatures on the west and east side of the fire with lower confidence. Enough that we wanted to make the team aware. |                                                               | Weather at time of flight:<br>Warmer night with gusty winds until after sunset. Light variable winds, with stronger winds at elevation. |                                                                                     |
| Date and Time Imagery Received by UASD:                                                                                                                                                                                                                                                                                      |                                                               | Type of media for final product:<br>UASD Log, File Geodatabases, Shapefiles, KMZ, PDF Maps                                              |                                                                                     |
| Date and Time Products Delivered to Incident:<br>8/27/2026 0422 PDT                                                                                                                                                                                                                                                          |                                                               |                                                                                                                                         |                                                                                     |
| Comments / notes on tonight's mission and this interpretation:<br>Steep terrain, running terrain awareness.                                                                                                                                                                                                                  |                                                               |                                                                                                                                         |                                                                                     |

The flight summary that travels with every package. Incident number, ordering agency, aircraft and sensor, interpreted size, weather at time of flight, objective, and the delivery timestamp.

## THE SYSTEM BEHIND IT

Submission triggers a webhook.  
Processing runs in an ArcGIS Notebook against arcpy. External network work runs in GitHub Actions. Deliverables attach back to the source record and email the pilot for approval. Approval publishes.  
**About five minutes, end to end.**

Nothing in that chain requires anyone to be awake, and nothing requires the pilot to know GIS.

## WORKS IN EVERY APP ON THE FIRE

Avenza, Ignis, TAK on Android or iOS, FireSync, Field Maps, ArcGIS. Every resource on the incident, contractor, state, federal, or cooperator, gets the data in a format their tools already read. That is why the package ships in every format at once.

## ALSO COLLECTED AND STANDARDIZED

Aerial ignition documentation, UAS launch and recovery points, spot fires, daily fire perimeter including crewed IR ingest, and cloud cover, so a coverage gap is recorded rather than assumed clear.

# One standard, whoever is flying.

Four organizations, four different aircraft, on four fires in one Oregon season. Each incident received the same packet in the same schema every time. The operator's own logo stays on the product.

|                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  <p><b>Fielder Mountain UAS IR</b><br/>OR-712S-030327<br/>Infrared Heat Sources<br/>20260827 0138 PDT<br/>DJI M300 + DJI H20T<br/>575 acres<br/>Eli Polsky<br/>20260827 0420 PDT</p> |  <p><b>Rowe Creek Complex</b><br/>OR-PRD-000491<br/>Infrared Heat Sources<br/>20260821 2300 PDT<br/>DJI M4TD + DJI M4TD<br/>2536 acres<br/>Clay Gottschalk<br/>20260822 0346 PDT</p> |  <p><b>Eggo Fire - ODF Wallowa Unit</b><br/>974014-27<br/>Infrared Heat Sources<br/>20260807 0200 PDT<br/>Mavic 2 Enterprise (FA3XNLRX9M) + DJI 1/2.3"<br/>Cody Michael Rickert<br/>20260807 0743 PDT</p> |  <p><b>Ramsey Spot Fire</b><br/>OR-711S-000039<br/>Infrared Heat Sources<br/>20260724 2327 PDT<br/>Skidio X 10 (FA3HAFTKW3) + Skidio Thermal<br/>Jason A. Wickizer<br/>20260725 0644</p> |
| <p><b>Rogue Reconnaissance</b><br/>Fielder Mountain, 27 Aug 2026<br/>DJI M300 + Zenmuse H20T<br/>575 acres · private contractor</p>                                                                                                                                   | <p><b>Hummingbird Drones</b><br/>Rowe Creek Complex, 21 Aug 2026<br/>DJI M4TD<br/>2,536 acres · commercial operator</p>                                                                                                                                               | <p><b>Oregon Dept. of Forestry</b><br/>Eggo Fire, Wallowa Unit, 7 Aug 2026<br/>Mavic 2 Enterprise<br/>State agency pilot</p>                                                                                                                                                               | <p><b>ODF South Cascade</b><br/>Ramsey Spot Fire, 24 Jul 2026<br/>Skidio X10 + Skidio thermal<br/>District aviation</p>                                                                                                                                                     |

## WHY THIS IS THE WHOLE POINT

A commercial vendor can always claim a friendly agency adopted its tool. Almost nobody can say a commercial competitor adopted their standard by choice. NOVA Software processes imagery and Hummingbird Drones flies incidents, and both produce conformant output because it is worth their while, not because a contract obliges them.

For a federal unit that means the packet arriving from a contractor, a state pilot, a fire district, or a nonprofit volunteer all lands in the same schema, the same folder structure, the same fields populated. The GISS does not adapt to the source.

## COLLABORATORS AND COOPERATORS

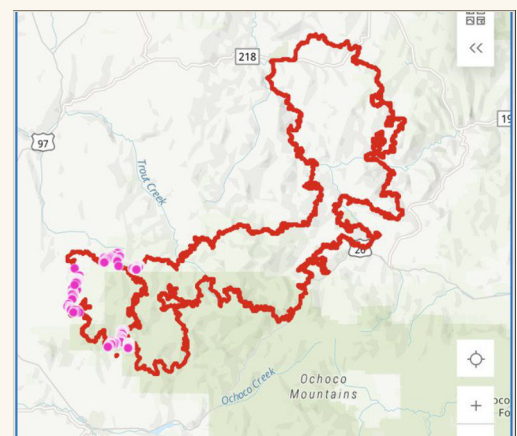
|                                 |                                                                                                                       |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <b>Oregon Dept. of Forestry</b> | State agency. Operational deployment 2024 through 2026, ordering agency on most incidents, letter of support on file. |
| <b>Hummingbird Drones</b>       | Commercial operator. Flies incidents, delivers conformant packages under its own branding.                            |
| <b>NOVA Software</b>            | Commercial thermal processing, credited on the flight summary.                                                        |
| <b>Grayback Forestry</b>        | Private contractor. Cooperating pilots, including aerial ignition.                                                    |
| <b>Scappoose Fire District</b>  | Cooperating fire district pilots.                                                                                     |
| <b>Rogue Reconnaissance</b>     | Call When Needed resource, state agreement.                                                                           |

## THE ARCHIVE

Every package is filed in an archive built in the interagency directory structure, incident by incident, night by night, and reachable at [uaswfc.org/ftp](https://uaswfc.org/ftp).

pacific\_nw / 2026\_Incidents\_Oregon /  
2026\_FielderMtn / IR / 20260827 /

Each night folder holds the 11x17 aerial and topo PDFs, the flight summary, the KMZ, the shapefile set, and the file geodatabase. Nothing has to be requested and nothing expires.



Rowe Creek Complex in the viewer. ODF, Hummingbird Drones, and NOVA processed data on one incident, in one layer, in one symbology.

# Incident record, four fire seasons.

Named incidents with UAS infrared collection standardized into the system. Feature counts are live values queried from the hosted service on August 30, 2026. Automated pipeline delivery has been operational since the 2024 season.

## 2026 · ELEVEN INCIDENTS

|                        |                 |
|------------------------|-----------------|
| East Evans Creek       | Jul 22 – Aug 10 |
| Brewer                 | Jul 25 – Aug 2  |
| Rowe Creek Complex     | Jul 29 – Aug 30 |
| I-5 MM 57 NB           | Aug 2 – Aug 6   |
| Eggo, ODF Wallowa Unit | Aug 7           |
| Woodrat Mountain       | Aug 7 – Aug 20  |
| Cottonwood             | Aug 9 – Aug 14  |
| Bologna                | Aug 10 – Aug 19 |
| Little Bear            | Aug 13 – Aug 16 |
| Rosenbaum              | Aug 14 – Aug 23 |
| Fielder Mountain       | Aug 16 – Aug 27 |

## 2025 · TWO

|                             |        |
|-----------------------------|--------|
| Upper Applegate Road        | Jun 26 |
| Grizzly Complex, Neil Creek | Jul 23 |

## 2024 · EIGHT INCIDENTS

|                      |                |
|----------------------|----------------|
| Upper Applegate 3900 | Jun 26 – Jul 1 |
| Salt Creek           | Jul 9 – Jul 18 |
| Microwave Tower      | Jul 23         |
| Courtrock            | Jul 27 – Aug 4 |
| Lee Falls Road       | Aug 9 – Aug 14 |
| Copperfield          | Sep 4 – Sep 8  |
| Fossil Complex       | Sep 9 – Sep 19 |
| Canyon               | Sep 16         |

## 2023 · ONE

|                    |                |
|--------------------|----------------|
| Tyee Ridge Complex | Aug 28 – Sep 5 |
|--------------------|----------------|

127,137

STANDARDIZED IR FEATURES,  
LIVE SYSTEM

79,777

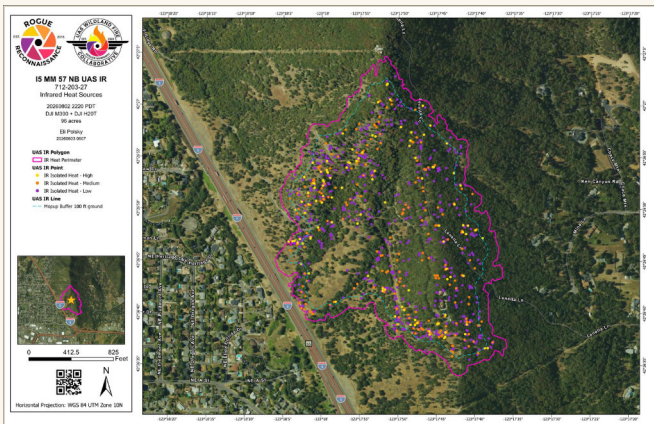
ISOLATED HEAT POINTS

286

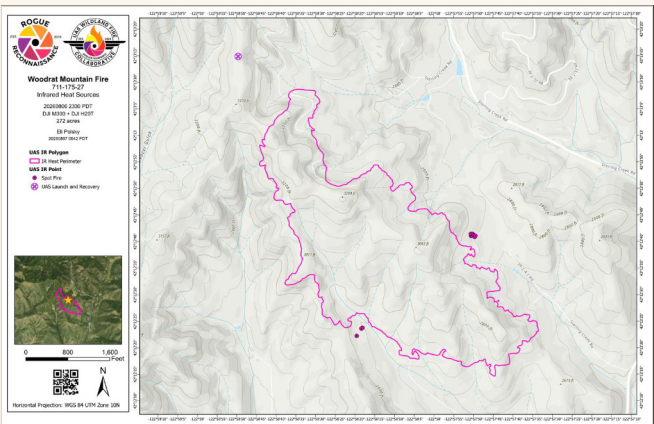
HEAT PERIMETERS

1,285

MOPUP BUFFER LINES



I-5 MM 57 NB, second night, August 2026. Initial attack off the interstate; the incident's first perimeter products came from these flights.



Woodrat Mountain, first night, August 2026. Flown during the same 21 day assignment that covered East Evans Creek and the I-5.



## The half of the year that decides how the fire behaves.

A canopy height model is a fuels map if you build it for fuels.

Drone LiDAR gets under canopy where aerial LiDAR thins out and where a ground crew spends a week. From one flight we produce a classified point cloud to ASPRS classes, bare earth terrain, surface model, canopy height, and from those the products a fuels planner actually asks for. Ladder fuel identification. Vegetation buffer analysis around structures and roads. Individual tree detection with crown polygons. Species and live or dead classification where the multispectral supports it.

The distinction we hold to is that the analysis has to survive being checked. On the Eugene ash inventory we reported 85 percent overall accuracy with Kappa 0.64, validated against 290 ground truthed trees, and published the confusion matrix. On the Ukiah mine work we checked the LiDAR terrain against the USGS 3DEP topobathymetric reference at 242 points across eight sites and reported the residuals. That is the difference between a product and a picture.

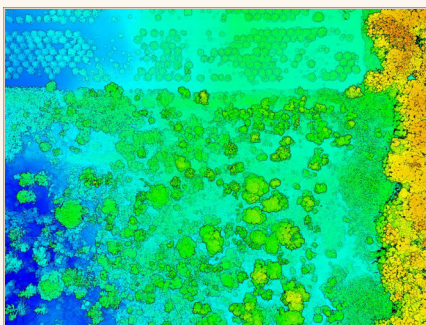
We are not licensed surveyors and we do not call any deliverable a survey. No boundary determination, no volumetrics for regulatory purposes, no right of way work. Products serve planning, design, and analysis.

### BLM UKIAH FIELD OFFICE, 2025

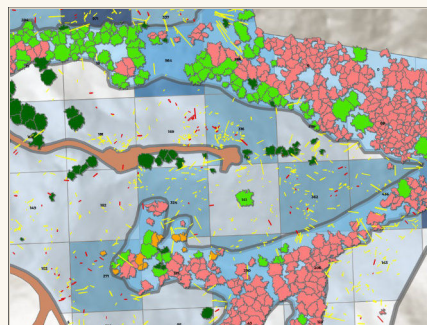
Drone LiDAR over abandoned mine sites in support of Bat Conservation International, on BLM administered land in northern California. Flown with the Freefly Astro and YellowScan Mapper+, an NDAA compliant aircraft, with flight plans and access cleared through the appropriate channels.

|                    |                      |
|--------------------|----------------------|
| Sites              | 10                   |
| Area               | 778 acres            |
| Resolution         | 0.25 m DEM, DSM, CHM |
| Check points       | 242 across 8 sites   |
| Vertical agreement | -0.12 m mean vs 3DEP |

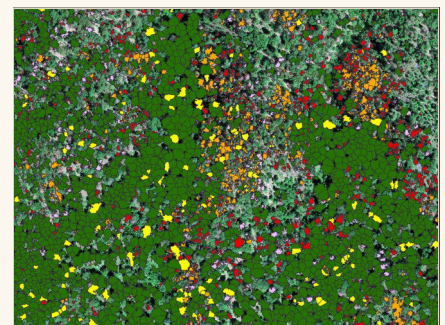
Harley Gulch, Helen, Clyde, Killpepper, Wall Street, Rathburn 1, 2, and 3, Wintun, Zimory.



Classified point cloud to ASPRS standard classes. Ground, low, medium, and high vegetation separated, which is what makes a ladder fuel call possible.

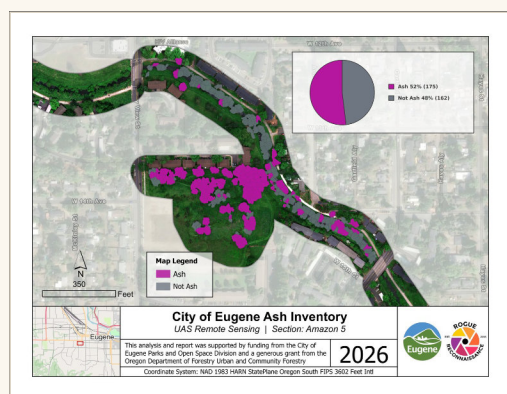


Post harvest unit for ODF. Every log delineated and split by decay class, canopy classified to species, riparian management area carried through.



Per tree health classification. Live and dead assessment across roughly 1,000 acres of Douglas fir, used to direct helicopter logging.

# Three programs, three different reasons the work held up.



Delivered section map, Amazon 5. Every crown classified ash or not ash, with the section tally on the sheet. 52 percent ash, 175 of 337 crowns.

## City of Eugene · Oregon ash inventory ahead of emerald ash borer

390 acres across 13 designated areas, two seasons of collection. Drone LiDAR for canopy structure, MicaSense RedEdge MX for spectral signature, and a fall senescence flight for the color change that separates ash from everything around it. Flown inside Class D airspace at KEUG under FAA authorization. We built the whole pipeline, crown delineation and zonal sampling in ArcGIS Pro and arcpy, treetop and crown delineation in R with height scaled search windows, vegetation and red edge indices, texture features, and a random forest classifier. The work was funded by the City of Eugene Parks and Open Space Division with a grant from Oregon Department of Forestry Urban and Community Forestry.

**12,632 crowns classified. 5,261 identified as Oregon ash. 85 percent overall accuracy, Kappa 0.64, validated against 290 ground truthed trees.** The finding worth carrying forward is that the fall senescence flight roughly doubled ash detection sensitivity. Timing beat sensor count.

## City of Ashland

### CITYWIDE CWPP LIDAR

Drone LiDAR across the city producing bare earth elevation, canopy height, individual tree canopy polygons, ladder fuel identification, and vegetation buffer analysis, in direct support of city GIS staff. This is the shape most useful to a federal unit doing WUI planning: the deliverable lands in the GIS the planners already run.

## Oregon Dept. of Forestry

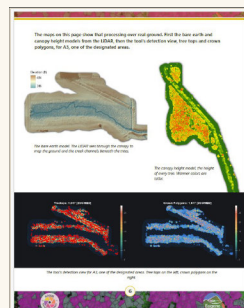
### DOWNED WOODY DEBRIS

Drone LiDAR and multispectral across two post harvest projects. Every log delineated and attributed with length, small and large end width, decay class, and calculated cubic feet, in a state plane system with imperial units so volumes come out in the units the contract uses. Canopy classified to species alongside it, riparian management areas carried through. Presented at the Oregon Society of American Foresters annual meeting, 2024.

## Private forestry

### LIVE AND DEAD, 1,000 ACRES

Individual tree health assessment across roughly 1,000 acres of Douglas fir, combining LiDAR structure with multispectral classification. The per tree reporting directed where a logging contractor put helicopters, which is a stronger claim than a map that ended up in a folder.



Bare earth, canopy height, treetops, crowns



Methods, true color against color infrared

## The report is part of the deliverable

Analysis that cannot be read by the person who has to act on it is not finished. Every project of this kind ships a written report alongside the data: what was flown and when, which sensor carried which job, how the model was trained, what it got right, and where it is weak.

The Eugene report runs the full method, from the RESEPI with its Hesai XT32 flown in October 2025 against an Emlid RS3 base, through the MicaSense RedEdge MX flown in May 2026, to the accuracy table and the confusion matrix. A city forester can follow it. So can a reviewer who wants to check it

## RESOURCES

# Aircraft, sensors, and the stack behind them.

### AIRCRAFT

|                     |                                                                                                                                          |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Freefly Astro       | United States manufactured, NDAA compliant. Primary platform for federal work outside the fire exception.                                |
| DJI Matrice 300 RTK | Fire platform. Typed UAR4, Unmanned Aircraft, Rotor Wing, Type 4 under state aviation framework. Remote ID and FAA registration on file. |

### SENSORS

|                      |                                                                                            |
|----------------------|--------------------------------------------------------------------------------------------|
| YellowScan Mapper+   | LiDAR                                                                                      |
| Inertial Labs RESEPI | Hesai XT32 LiDAR with integrated 24 MP camera                                              |
| MicaSense RedEdge MX | Five band multispectral, blue, green, red, red edge, NIR, with DLS 2 and reflectance panel |
| DJI Zenmuse H20T     | Radiometric thermal and zoom                                                               |
| DJI Zenmuse XT       | Thermal                                                                                    |
| DJI Zenmuse P1       | Full frame photogrammetry                                                                  |
| Emlid RS3            | GNSS base station, PPK and RTK workflows                                                   |

### ACCURACY PRACTICE

Base station coordinates resolved through CSRS-PPP. PPK trajectory processing in Inertial Explorer. Independent check points reported with residuals on terrain deliverables. Thermal thresholds set against measured temperature, not a color ramp. Every hotspot extraction writes a QA report alongside the geodatabase.

### PROCESSING AND ANALYSIS

ArcGIS Pro with arcpy and the ArcGIS Python API. Global Mapper Pro. Agisoft Metashape Professional. Pix4D and Pix4Dfields. Inertial Explorer Xpress. CSRS-PPP. R with lidR, ForestTools, ranger, caret, and terra. Python with PDAL and Open3D.

### DELIVERY AND HOSTING

ArcGIS Online hosted feature services, Scene Viewer, Experience Builder, Survey123, and Dashboards. NIFC FTP. Intterra. Avenza. Direct delivery in shapefile, file geodatabase, KMZ, LAS and LAZ, GeoTIFF, and PDF.

### AUTOMATION AND INFRASTRUCTURE

Production ETL pipelines, scheduled and event driven automation, GitHub Actions, Cloudflare Workers and Pages, Astro, Flask. Hosted GIS system administration and portal management.

### INSTRUCTION AND INDUSTRY

- Instructor, A-450 and S-373, Salem, Oregon, 2026. UAS flight instruction for visiting Taiwanese firefighters.
- Presenter, Oregon Society of American Foresters annual meeting, 2024.
- Guest instructor and live demonstration lead, Southern Oregon University remote sensing courses. Capstone mentor for wildland fire and WUI projects.
- Selected for Oregon UAS Innovation Challenge, Cohort 3, 2025.



East Evans Creek, fourth night, July 2026. Heat sources, perimeter, and mopup buffer, the product a division supervisor works from.



## PAST PERFORMANCE

# Rated Exceptional by the agency that uses us most.

|                                                                                                                                                                                                                                                                                                                                                                                            |          |                                   |           |                       |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------|-----------|-----------------------|--|
| Contractor/Company Name:                                                                                                                                                                                                                                                                                                                                                                   |          | Contract Type:                    |           | Resource Type and ID: |  |
| Rouge Reconnaissance                                                                                                                                                                                                                                                                                                                                                                       |          | Call When Needed                  |           | Multiple Type 3 UAS   |  |
| Agreement Number:                                                                                                                                                                                                                                                                                                                                                                          |          | Dates Covered by this evaluation: |           |                       |  |
| ODF-UASCWN-2022                                                                                                                                                                                                                                                                                                                                                                            |          | 2019 - 2022                       |           |                       |  |
| OVERALL RATING                                                                                                                                                                                                                                                                                                                                                                             |          |                                   |           |                       |  |
| Unsatisfactory                                                                                                                                                                                                                                                                                                                                                                             | Marginal | Satisfactory                      | Very Good | Exceptional           |  |
|                                                                                                                                                                                                                                                                                                                                                                                            |          |                                   |           | X                     |  |
| If the vendor performed other than Satisfactory (Unsatisfactory, Marginal, Very Good, or Exceptional) the evaluator shall document reasons for such rating.                                                                                                                                                                                                                                |          |                                   |           |                       |  |
| <b>Summary:</b> Rouge Reconnaissance has been on Call When Needed contract with the Oregon Department of Forestry since 2019. Contractor has performed exceptionally in this time frame, providing situational awareness and operational maps for use by the agency. A summary of the incidents supported by Rouge Reconnaissance is provided as an attachment to this performance rating. |          |                                   |           |                       |  |
| <b>Quality of Service:</b> (How did the Contractor perform, document any noncompliance or performance issues)<br>The Vendor's Quality of Service (knowledge of the job, physical condition of personnel, attitude, decisions under                                                                                                                                                         |          |                                   |           |                       |  |

ODF Aviation Unit Contractor Performance Rating, agreement ODF-UASCWN, evaluation period 2019 to 2022, signed by State Aviation Coordinator Sarah Prout. Overall rating: Exceptional.

*"You and your crews have been a proven and valuable resource for us to meet our fire suppression goals since the 2019 fire season... they met or exceeded our expectations."*

LEE WINSLOW · MEDFORD UNIT FORESTER AND SWO DISTRICT AVIATION OFFICER · OREGON DEPARTMENT OF FORESTRY

*"The pilots are self sufficient with a background in wildfire which helps them understand incident needs and the importance of accuracy when producing mapping products... Excellent safety record with no incidents or accidents to date."*

SARAH PROUT · STATE AVIATION COORDINATOR · OREGON DEPARTMENT OF FORESTRY

## LETTERS AND EVALUATIONS ON FILE

ODF Aviation Contractor performance rating, Exceptional, 2019 to 2022. Letter of support for the Collaborative, 2026.

ODF Southwest Oregon CWN equipment and crew performance evaluation, 2023.

USFS Region 6, PNW Letter of support, regional UAS program, 2024.

USFS Deschutes NF Letter of support, Sisters Ranger District, 2024.

USFS Willamette NF Letter of support, Supervisor's Office, 2024.

USFS Rogue River-Siskiyou NF Letter of support, 2024.

USFS Okanogan-Wenatchee NF Letter of support, 2024.

Sealaska Heritage Institute Letter of support, cultural resource mapping, 2023.

University of Alaska Anchorage Letter of support, 2022.

Full copies of every letter and evaluation ship with any proposal on request, with references.

## CONTACT



## Contact and follow up

Sample deliverable packages, accuracy and validation reporting, flight documentation, and references are available on request for any project in this document. The full incident archive is open at [uaswfc.org/ftp](https://uaswfc.org/ftp), no account required.

---

### Eli Polsky

[eli@rogurecon.net](mailto:eli@rogurecon.net)  
808-298-6290  
4951 Griffin Creek Rd  
Medford, Oregon 97501

### Rogue Reconnaissance

[rogurecon.net](https://rogurecon.net)  
UEI RUE6PBWLAN6  
CAGE 9DDE5

### Hawaii Mapping

[hawaiimapping.com](https://hawaiimapping.com)  
UEI P2SHL3HMWYU6  
CAGE 9LJS6

### UAS Wildland Fire Collaborative

[uaswfc.org](https://uaswfc.org)  
[eli@uaswfc.org](mailto:eli@uaswfc.org)  
UEI MCQVVQLW6EC4  
501(c)(3), EIN 42-2344101

## ODF AVIATION UNIT CONTRACTOR PERFORMANCE RATING

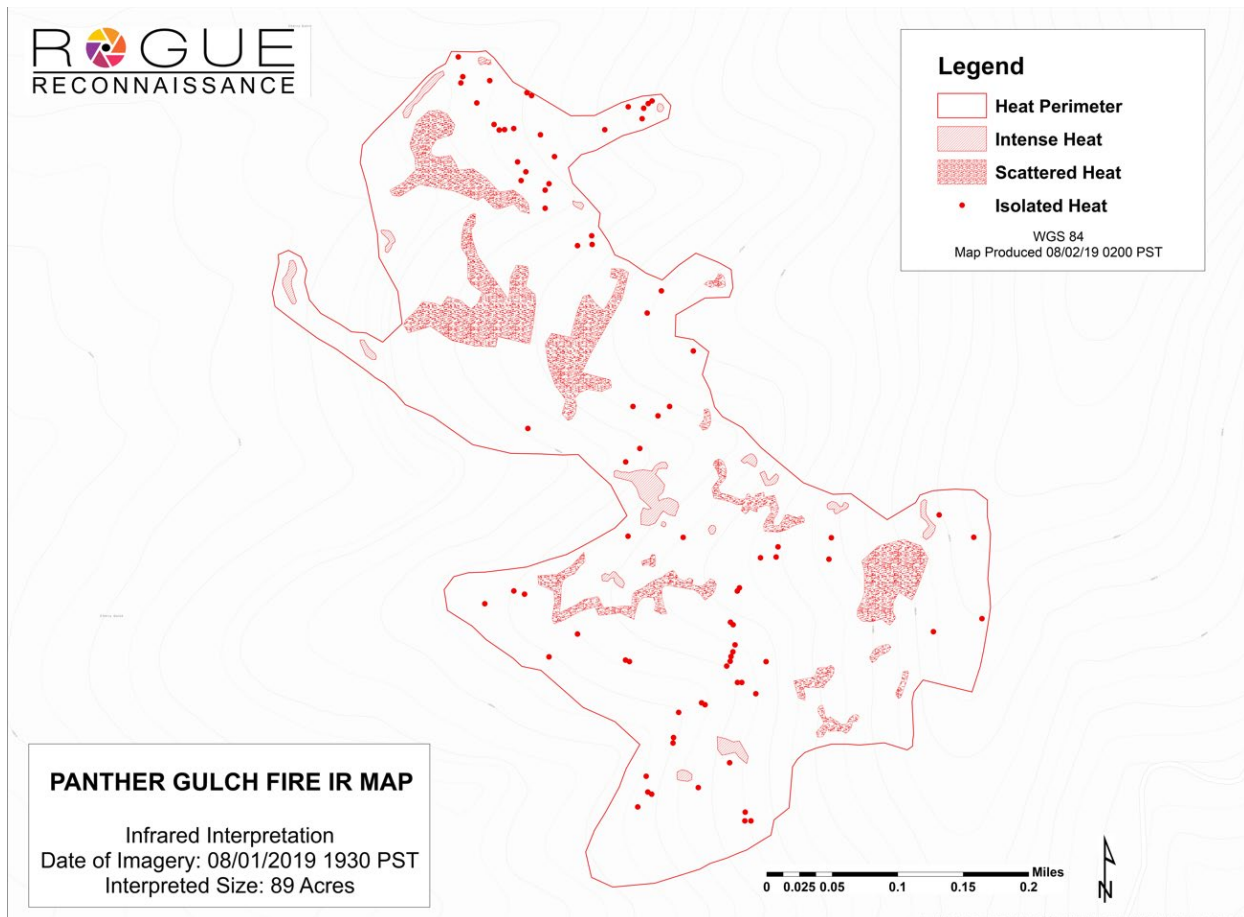
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                                          |                              |                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------|------------------------------|--------------------|
| <b>Contractor/Company Name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 | <b>Contract Type:</b>                    | <b>Resource Type and ID:</b> |                    |
| Rouge Reconnaissance                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 | Call When Needed                         | Multiple Type 3 UAS          |                    |
| <b>Agreement Number:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 | <b>Dates Covered by this evaluation:</b> |                              |                    |
| ODF-UASCWN-2022                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 | 2019 - 2022                              |                              |                    |
| <b>OVERALL RATING</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                 |                                          |                              |                    |
| <b>Unsatisfactory</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Marginal</b> | <b>Satisfactory</b>                      | <b>Very Good</b>             | <b>Exceptional</b> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                 |                                          |                              | <b>X</b>           |
| <i>If the vendor performed other than Satisfactory (Unsatisfactory, Marginal, Very Good, or Exceptional) the evaluator shall document reasons for such rating.</i>                                                                                                                                                                                                                                                                                                          |                 |                                          |                              |                    |
| <p><b>Summary:</b> Rouge Reconnaissance has been on Call When Needed contract with the Oregon Department of Forestry since 2019. Contractor has performed exceptionally in this time frame, providing situational awareness and operational maps for use by the agency. A summary of the incidents supported by Rouge Reconnaissance is provided as an attachment to this performance rating.</p>                                                                           |                 |                                          |                              |                    |
| <p><b>Quality of Service:</b> <i>(How did the Contractor perform, document any noncompliance or performance issues)</i><br/> <i>The Vendor's Quality of Service (knowledge of the job, physical condition of personnel, attitude, decisions under stress, initiative, use of safe practices, crew organization, performance of resource, equipment organization/reliability, and supervisory performance) on this incident was Satisfactory unless otherwise noted.</i></p> |                 |                                          |                              |                    |
| <p>The high level of fire and UAS knowledge on this team has proven to be a valuable resource for ODF during complex and challenging fire seasons. The pilots are self sufficient with a background in wildfire which helps them understand incident needs and the importance of accuracy when producing mapping products. See attached incident summary for examples. Excellent safety record with no incident/accidents to date.</p>                                      |                 |                                          |                              |                    |
| <p><b>Timeliness</b> <i>(Did the Contractor meet Date and Time on Resource Order, perform work in a timely manner, demob timely)</i> <i>The Vendor's Timeliness on this incident was Satisfactory unless otherwise noted.</i></p>                                                                                                                                                                                                                                           |                 |                                          |                              |                    |
| <p>Upon notification of resource order Rouge Recon has an ability to mobilize quickly with the equipment needed. No issues with timeliness or availability.</p>                                                                                                                                                                                                                                                                                                             |                 |                                          |                              |                    |
| <p><b>Business Relations</b> <i>(Did the Contractor perform in a business-like manner, complete administrative requirements timely)</i> <i>The Vendor's Business Relations (working with government personnel, working with other contractors/vendors, and offline conduct) was Satisfactory unless otherwise noted.</i></p>                                                                                                                                                |                 |                                          |                              |                    |
| <p>The owner of the company is very personable and easy to work with. All administrative requests and/or requirements were completed in a timely and concise manner. The contractor works to ensure the agencies needs are met and consistently checks in to ensure the equipment and staff are exceeding expectations.</p>                                                                                                                                                 |                 |                                          |                              |                    |
| <b>Contractor Signature:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 | <b>Date:</b>                             |                              |                    |
| <b>Printed Name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 | <b>Phone Number:</b>                     |                              |                    |
| <b>Rated By Signature:</b> <i>Sarah Prout</i>                                                                                                                                                                                                                                                                                                                                                                                                                               |                 | <b>Date:</b> 02/21/2023                  |                              |                    |
| <b>Printed Name:</b> Sarah Prout,<br>State Aviation Coordinator                                                                                                                                                                                                                                                                                                                                                                                                             |                 | <b>Phone Number:</b> 503-798-5525        |                              |                    |



## ODF Performance Rating – Incident Summary

### Performance Period 2019 – 2022

**Panther Gulch**, 8/1/2019, 89 interpreted acres, one operational shift. Ordered at approximately 1000 hrs and began the SGI Waiver application process with ODF Aviation Unit. Received waiver an hour later and began flight planning. No KML of boundary provided. I showed up to the incident around 1600, went to the night shift briefing, and began mapping after sunset. Mapping was completed around 2230, and we left the fire to begin processing and digitizing the thermal data. The final map and deliverables were sent to the team around 0200. This was a proof-of-concept mission.



**South Obenchain Operations UAS IR**

OR-711S 026621  
9/23/2020

Fire Perimeter  
32,671 Acres  
as of 9/19/2020

Legend:

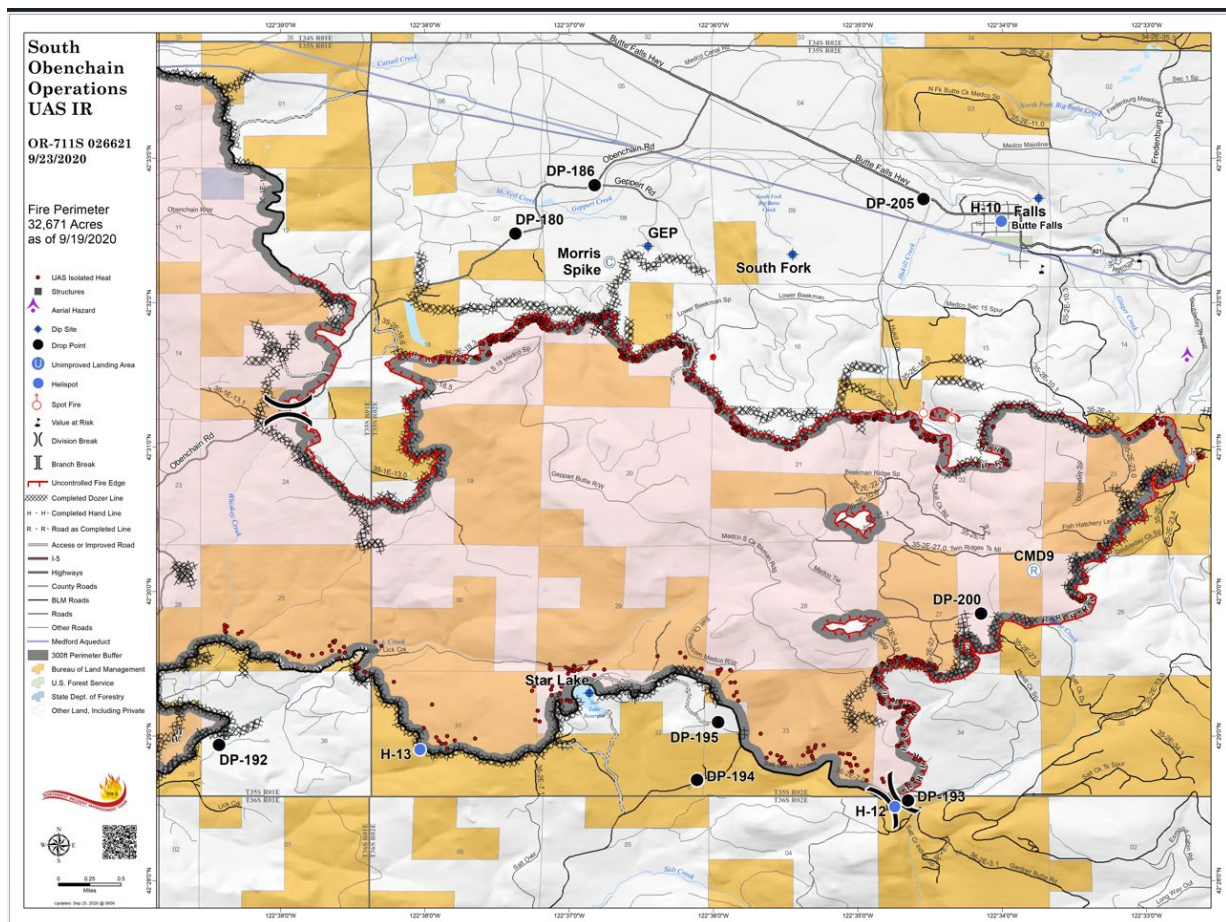
- UAS Isolated Heat
- Structures
- Aerial Hazard
- Drop Site
- Drop Point
- Unimproved Landing Area
- Helipad
- Spot Fire
- Value at Risk
- Division Break
- Branch Break
- Uncontrolled Fire Edge
- Completed Dozer Line
- Completed Hand Line
- Road as Completed Line
- Access or Improved Road
- Highways
- County Roads
- BLM Roads
- Roads
- Other Roads
- Malheur Aqueduct
- 300ft Perimeter Buffer
- Sanford Land Management
- U.S. Forest Service
- State Dept. of Forestry
- Other Land, including Private

Map Labels:

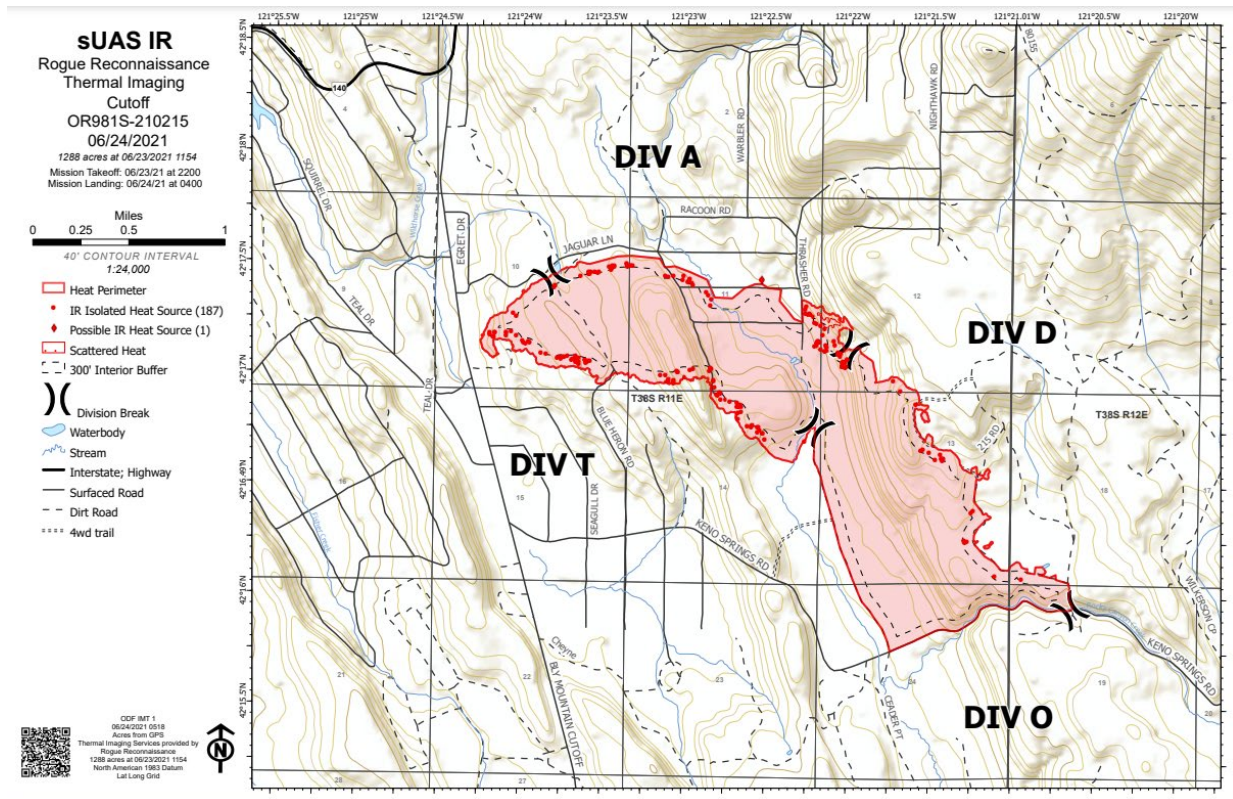
- DP-186
- DP-180
- GEP
- Morris Spike
- South Fork
- DP-205
- H-10
- Falls
- Butte Falls
- CMD9
- DP-200
- DP-195
- BP-194
- H-12
- DP-193
- Star Lake
- H-13
- DP-192

Map Scale: 0 to 10 miles

Map Date: 09/23/2020 09:00

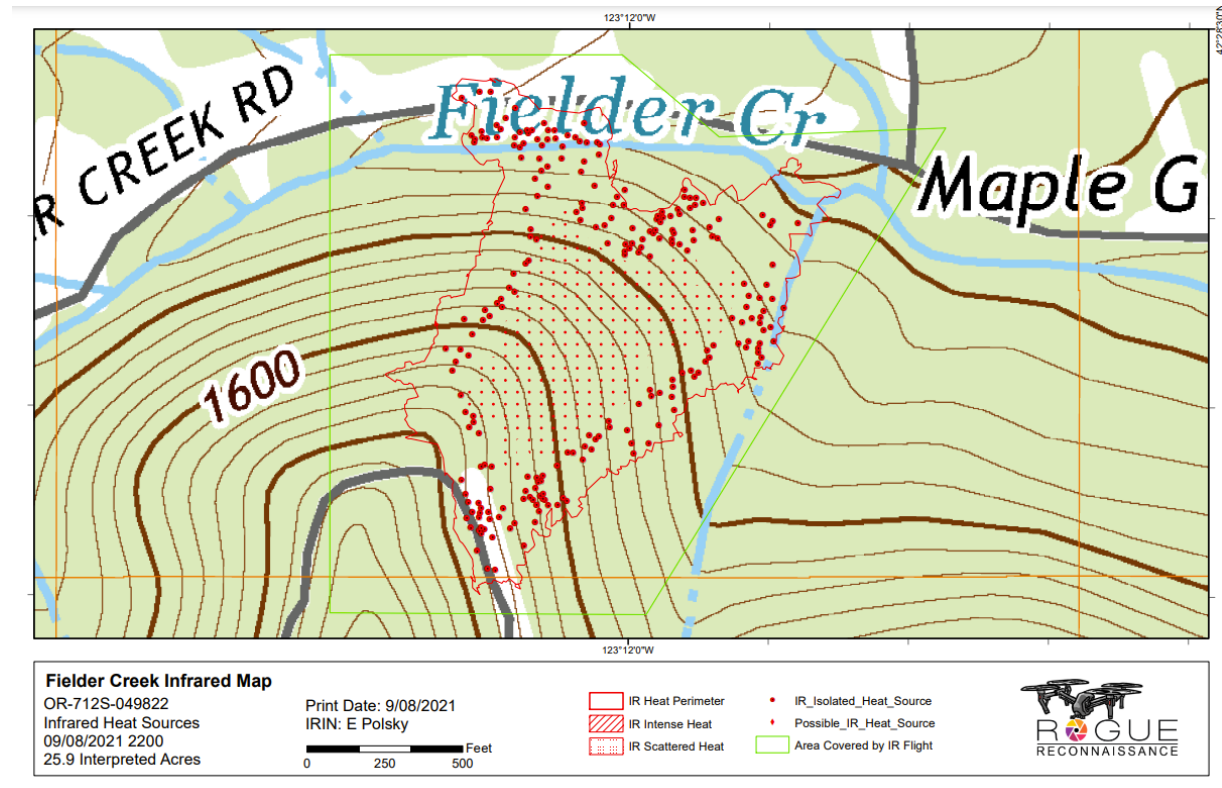


**Cutoff:** 6/24 - 6/25/2021, 1288 interpreted acres, two operational shifts. Ordered at approximately 10 am, acquired the SGI waiver in about two hours, approved to fly up to 1200 feet at night. Mop-up operations were already in full swing, with a heavy rain storm calming the fire down. This fire was unique in the sense that it was an excellent example that we could cover a significant incident in one night, and Overwatch imaging was performing flights as well, showing that our data was perfectly in line with theirs showing our data with more detailed heat signatures along the perimeter since we fly at a much lower altitude. The total area we could fly, and map was 2000+ acres in one shift. The Data was digitized and packed into a shapefile and handed off to the GIS team around 4 am before the morning team briefing.





**Fielder Creek**, 9/8/2021, 25.9 interpreted acres, one operational shift. Ordered around 10am and acquired an SGI waiver within a few hours. We worked directly with Southwest Oregon District, performed an IR flight, and made the map for the incident with 100, 200, and 300 ft buffers to assist mop-up efforts. We were able to get the map to ODF around 0200.





# Oregon

Tina Kotek, Governor

Department of Forestry  
Southwest Oregon District  
Headquarters  
5286 Table Rock Rd.  
Central Point, OR 97502  
Phone: (541) 664-3328  
Fax: (541) 664-4340

Rogue Reconnaissance: Elijah Polsky

06/09/2023

Lee Winslow  
Medford Unit Forester  
SWO District Aviation Officer  
Oregon Department of Forestry  
5286 Table Rock Road  
Central Point, OR 97502

**RE: CWN UAS Equipment and Crew Performance Evaluation**

It was a pleasure to have the opportunity to work with Rogue Reconnaissance in recent years. You and your crews have been a proven and valuable resource for us to meet our fire suppression goals since the 2019 fire season when we first started working together.

In recent years, the increased number of fires and days in extreme weather conditions, coupled with the persistent severe drought, we have relied steadily on your aircraft and crew, and they met or exceeded our expectations. Their attitudes, contribution, and reliability were appreciated as they showed up ready to work each day, brought the latest cutting-edge technology, seamlessly communicated with ground resources and air operations, and instantly provided valuable insight real-time and excellent field and map products.

I know the field crews were supported well by the owner and the company. Your ability to organize and mobilize quickly is always appreciated. All equipment was kept in good working order and any delivery of service was uninterrupted. Throughout any operations, safety was never an issue, and I rested assured of knowing the standards that your pilots held. I also appreciated your cooperation on the various contract administration nuances that occurred throughout this season. As well as taking the time to work with us early season on our some of our own UAS operations and training, what a great learning opportunity that was!

Again, thanks for all your help! I look forward to working with you and your crew again in the coming seasons.

Sincerely,

Lee Winslow



# Oregon

Department of Forestry  
Protection from Fire  
Aviation Unit  
2600 State St  
Salem, OR 97310-1336  
[www.oregon.gov/ODF](http://www.oregon.gov/ODF)

To Whom it May Concern,

I am writing in support of the continued development of the UAS Wildfire Collaborative (UASWFC) data platform and to share the Oregon Department of Forestry's (ODF) perspective based on our operational use.

ODF has deployed the UASWFC platform in support of real-world wildfire incidents in the State of Oregon. Through this operational use, the system has demonstrated its ability to support the centralized collection, organization, and standardization of UAS data in a way that aligns with the needs of incident management and aviation coordination.

From an agency perspective, ODF sees clear value in the development of a standardized, nationwide, UAS data platform. The ability to consistently capture, manage, and share UAS-derived information across incidents and jurisdictions addresses a known operational gap and supports more efficient coordination and decision-making. Based on our experience to date, we view UASWFC as a promising solution in this space.

ODF is engaged in ongoing discussions with Eli Polsky regarding the future of the platform as it evolves toward a formal subscription model. We are interested in continued collaboration and evaluating opportunities for future participation as the system matures.

We appreciate the opportunity to support innovative solutions that enhance wildfire response and improve the integration of emerging technologies into operational environments.

Respectfully,

Sarah Prout,  
State Aviation Coordinator  
Phone: (503)798-5525  
Email: [sarah.b.prout@odf.oregon.gov](mailto:sarah.b.prout@odf.oregon.gov)





**File Code:**

**Date:** October 8, 2024

To whom it may concern:

Re: Letter of recommendation for Elijah Polsky, S-373 enrollment

I am writing to express my support for Elijah Polsky's nomination for the S-373 UAS Incident Operations course and the opening of his UASP taskbook. Over a decade ago, I had the pleasure of first hiring Elijah to work for the Forest Service as a biological technician, and later as a wildland firefighter. Over the years, I have seen his skills evolve, particularly in the realm of UAS technology and data analysis.

Throughout the years, I have followed Elijah's growth in UAS operations and have reviewed some of the data products he has produced. His ability to develop and implement UAS IR mapping and Mopup maps with heat intensity has been impressive. These tools have provided valuable situational awareness, reduced firefighter exposure, and helped prioritize work on incidents by supplying real-time, accurate data.

Mr. Polsky has also led the development of the UAS Wildland Fire Cooperative for the state of Oregon and its contractors—a Geospatial Hub designed to integrate and display live IR feeds, aerial imagery, and other UAS data for IMT and ground resources ([UAS Wildland Fire Cooperative](#)). This platform has played a critical role in supporting wildland fire response efforts and has a direct data stream to Intterra, to ensure GIS data is seamlessly delivered to decision-makers in real-time.

As principal of Rogue Reconnaissance and a GISS, Mr. Polsky has mapped miles of fire line overnight, providing real-time data that supplements and sometimes replaces NIROPS operations. He has already successfully mapped thousands of acres, delivering hot spot mapping for mop-up efforts and live feed updates to incident command and ground crews.

Mr. Polsky has already been successfully supporting wildfires in southwestern Oregon with UAS as an AD employee:

Total Operational Shifts: 71

Total Operational Hours: 1136

Total Flight Hours: 156 (160 including RX Burns)

Incidents:

Panther Gulch



South Obenchain  
Cutoff  
Fielder Creek  
Tyee Ridge Complex  
Salt Creek  
Lonerock  
Lee Falls Road  
Fossil Complex

As you are aware, longer, and more intense fire seasons greatly tax our fixed-wing and rotor-wing aircraft and pilots, with UAS providing a safer alternative to traditional aircraft. There is a need across the agency and fire service to increase our UAS fleet and capacity.

Elijah's combination of technical expertise, leadership, and dedication to improving operational effectiveness would make him an invaluable asset to the federal UAS program. I fully support his nomination for the S-373 training and believe that his innovative approach could benefit the development of a geospatial hub that could serve our agency well.

Please feel free to contact me at 541.410.7630 or at [ian.reid2@usda.gov](mailto:ian.reid2@usda.gov) for any questions or follow-up.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Ian Reid', is written over a horizontal line.

IAN REID  
Sisters District Ranger



**File Code:** 1500

**Date:** September 26, 2024

To whom it may concern,

I am writing to express my support for Elijah Polsky's nomination for the S-373 UAS Incident Operations course and the opening of his UASP taskbook. As Elijah's former Ranger at the Siskiyou Mountain Ranger District, where he worked as both a Biological Technician and later as a Wildland Firefighter, I have seen firsthand his dedication, skills, and commitment to excellence in both fields.

While we have not worked directly together in UAS IR operations, I have had the opportunity to review the UAS products that Elijah and his team have produced, as well as the UAS Wildland Fire Cooperative he developed. His ability to integrate UAS technology into wildland fire response efforts is remarkable, and his work stands as a strong example of innovation in this field.

Elijah's creation of the UAS Wildland Fire Cooperative for the state of Oregon serves as a Geospatial Hub that streams live IR feeds, aerial imagery, and other critical UAS data to Incident Management Teams and ground resources. His partnership with Intterra ensures that GIS data is seamlessly delivered to decision-makers in real time, allowing for more effective firefighting strategies.

Elijah's technical expertise, leadership, and innovative thinking would make him an invaluable asset to the federal UAS program. I strongly support his nomination for the S-373 course, and I am confident that his continued contributions will benefit the UAS community and enhance wildland fire response efforts.

Please do not hesitate to contact me if you need further information at [donna.mickley@usda.gov](mailto:donna.mickley@usda.gov) or 541-864-0900

Sincerely,

DONNA M. MICKLEY  
Acting Forest Supervisor



To Whom it May Concern,

I am writing to support Eli Polsky's nomination for the UAS Incident Operations class, S-373. Based on my experience working with Eli, I am confident that he will be a valuable asset to the Federal UAS Program. His existing qualifications, experience with the agency, and proven track record in the field make him an ideal candidate for this training.

Eli has demonstrated exceptional skills and knowledge in various UAS-related roles. His experience in reconnaissance work for prescribed fires, coupled with his ability to analyze and interpret UAS data, has been invaluable in supporting wildfire management efforts. His recent involvement in the Community Wildfire Protection Plan for Ashland further highlights his expertise in utilizing UAS technology to address complex environmental challenges.

Eli's proficiency as a UAS pilot, combined with his understanding of GIS and data analysis, positions him well for the demands of the S-373 training. His prior experience working on incident management teams, both wildfire and prescribed fire, showcases his ability to leverage UAS data to support operational decision-making.

I strongly believe that Eli Polsky is an excellent candidate for the S-373 training. His existing qualifications and proven experience make him a valuable investment for the Federal UAS Program, Region 6, and the Rogue River Siskiyou National Forest. Given his skills and knowledge, I am confident that he will become a significant contributor to the program's ongoing success. UAS operators are often in short supply. To address this challenge and enhance our agency's capabilities, strengthening collaborations with external partners will be instrumental.

Sincerely,



**Lindsey B. Negherbon**  
**R6/R10 Fire Ecologist (detailed)**  
**Fire, Fuels, and Aviation Management**

**USDA Forest Service**  
**Pacific Northwest & Alaska Regions**

**Cell: 541-430-0209**  
[lindsey.negherbon@usda.gov](mailto:lindsey.negherbon@usda.gov)

6941 Upper Applegate Rd  
Jacksonville, OR 97530  
[www.fs.fed.us](http://www.fs.fed.us)



*Caring for the land and serving people*



To Whom it may concern,

I am writing to express my support for Eli Polsky to be nominated for the S-373 (UAS Incident Operations training. I believe he will be a valuable asset for the Federal UAS Program. With the completion of this course, he will be able to open his UASP taskbook as he already has A-450.

I have worked with Eli for many years in different capacities. He was an engine crewmember of mine for several years, gaining him wildfire and prescribed fire experience. He has done reconnaissance work for prescribed fire for us providing visual status of our smoke column near a smoke sensitive area and supplied IR maps that assisted resources in the mop-up phase. Most recently I worked him to help develop the Community Wildfire Protection Plan for the city of Ashland. His ability to operate the UAS and interrupt data (i.e. LiDAR and Multispectral data) to meet the infrastructure analysis data needs and supply report and maps to the city of Ashland was extremely helpful to the project.

Eli already possesses a lot of skills necessary for the UAS field. He is already a proficient UAS pilot he also has a good understanding of GIS and data analysis. Eli has already worked many incidents both wildfire and prescribed fire providing live stream data to incident leadership and resources. He led the development of the UAS Wildland Fire Cooperative for the state of Oregon with the goal to provide a Geospatial Hub designed to integrate and display live IR feeds, aerial imagery, and other UAS data for IMT and ground resources.

In conclusion, I believe that it is worth the spot in the class and the investment in training Eli Polsky. He will be an big asset to the UAS program with minimal work because he already has the skills and experience as well as the knowledge required for UAS in the fire environment.

Sincerely,

September 26<sup>th</sup> 2024

To whom It may concern,

I'm writing to express my enthusiastic recommendation for Elijah Polsky's nomination for the S-373 UAS Incident Operations course and to open his UASP taskbook. Elijah and I have worked together with the USFS in the past, and I've seen his UAS skills grow significantly over the years, leading to impressive advancements in the quality of his UAS products.

One area where Elijah's expertise truly stands out is in his ability to produce UAS IR maps and Mopup maps with heat intensity. These maps have proven invaluable for situational awareness during firefighting operations. His work has directly contributed to reducing firefighter exposure by providing clear, actionable data that helps prioritize areas of focus and optimize resource allocation on incidents. This has had a direct impact on improving safety and operational efficiency.

I have no doubt that his expertise would be an asset to the federal UAS program. In particular, I believe that bringing his skills to the Rogue-Siskiyou National Forest would help set the foundation for the development of a broader geospatial hub that Region 6 could adopt.

I fully support Elijah's nomination for S-373 and believe that his skills and experience will contribute greatly to the future of UAS operations within the federal program.

If you have any questions or need additional information, please feel free to contact me.

Sincerely,

Jacob Wisdom

Prevention Technician

Okanogan-Wenatchee National Forest, Chelan Ranger District

509-699-6433

[jacob.wisdom@usda.gov](mailto:jacob.wisdom@usda.gov)





January 24, 2023

Elijah Polsky  
Rogue Survey and Photography LLC  
542 Fairview Street  
Ashland, OR 97520

To Whom It May Concern:

Sealaska Heritage Institute engaged Rogue Survey and Photography in 2017 to document several coastal fish trap sites in remote areas of Southeast Alaska using high quality drone photography. The sites included a small river and its estuary, and two island beach areas characterized by water-worn rocks fashioned into pre-contact fish traps. The river and estuary were actually a complex consisting of multiple fish traps, while the others were large circular traps located in the intertidal zone. Collectively, they represented ingenious methods of sustainable salmon fishing carried out by Tlingit Indians prior to contact with white men.

We hired Rogue Survey for their capability to create high-quality video of these places and then "stitch" the images into effective presentations suitable for our museum exhibit on the specialized Tlingit methods of salmon fishing. We asked them to film a complete tidal cycle at the different locations so they could later create a visual presentation of the rise and fall of the tides over and around these structures to illustrate how the traps utilized the tides in their unique style of salmon fishing. The presentations were accompanied by a scholarly narrative also filmed on location.

The project was exceptionally successful in accomplishing our objective to create a color visual display of how these fish traps utilized the landscape to catch fish effectively and sustainably and thus support Tlingit villages in the area. We are more than satisfied with their final product. The exhibit is seen each year by hundreds of primary and secondary students in the Juneau-Douglas area and has been integrated into school curriculum lessons that we have developed around it. During the cruise ship season, the exhibit is viewed by thousands of passengers who come to Juneau and seek to learn about the local Alaska Native culture and history.

I very strongly recommend Elijah and his group to successfully carry out similar projects in remote natural settings and achieve the specialized objectives of their clients.

Best regards,

A handwritten signature in blue ink that reads "Chuck Smythe".

Chuck Smythe, Ph.D.  
Senior Ethnologist

## Letter of Recommendation for Elijah Polsky

To Whom It May Be of Interest

This document is a letter of reference for Elijah Polsky of **Rogue Reconnaissance** who requested it. I have known Mr. Polsky in a professional capacity since our work together in 2017 and 2018.

In 2017, I sought drone video photographers to work for me to document the twelve-hour tidal cycle at the mouth of two streams located in southern southeast Alaska. I inquired in Alaska, British Columbia, Washington state, and Oregon. More experienced firms declined to bid, I assume because of the technical requirements for acquiring images to create a time lapse of the tidal change from the same overhead GPS address over 10-12 hours. I finally got in contact with Elijah Polsky whose firm is now known as Rogue Reconnaissance, and went over the project details, the technical requirements for producing time lapse showing tidal change from low to high back to low tide again. He was excited with the project and said he needed to do some testing with his drones to see how accurately they could be repositioned to the exact same spot to get the imagery necessary for 10-12 hour time lapse. He came back with a positive assessment so we went ahead with our discussions. I knew that we had to have exceptional environmental conditions to be successful and luckily we did: no clouds to obscure long summer night light, no rain and most important no wind! Elijah arrived with the Drone Boys and three drones that would be rotated over the 10 hr period at the two streams separated by 10 miles on two consecutive days. Note well – each drone was only capable of doing 20 minutes of recording images every 3 seconds that would be merged for the time lapse. The rotation among the three drones allowed sufficient down time to recharge the batteries of the drones.

Elijah and his crew did a remarkable job in a) accomplishing the filming then 2) merging the images acquired into time lapse. He then did some additional work with spatial measurements of locations at the sites that were helpful.

The imagery has been incorporated into two videos presented in an exhibit on Traditional Tlingit Fishing Technologies on display at the Sealaska Heritage Institute in Juneau, Alaska.

Since the completion of our project, Elijah has informed me that the firm has added LIDAR imagery and analysis to the toolbox enhancing their capabilities.

Our project was a remarkable and unexpectedly high quality success given all of the unknowns at the onset. Elijah, as crew leader, was easy to work with, personable, good sense of humor, responsive, creative and really a joy to be around. He has my full and complete recommendation. I would have hired him for another project I was developing but the circumstances were not conducive to undertaking it.

Please feel free to contact me if you have any questions. I can be reached at [sjlangdon@alaska.edu](mailto:sjlangdon@alaska.edu) or on my cell at 907-227-3126. I would be happy to be of assistance if needed.

With best regards,

Steve J. Langdon, Ph.D.

Emeritus professor of anthropology  
University of Alaska Anchorage  
Anchorage, Alaska