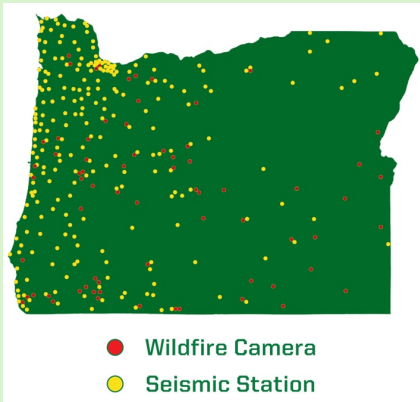


The Oregon Hazards Lab at the University of Oregon



UNIVERSITY OF
OREGON



- Monitoring and research program
- ~20 staff members w/ diverse skills
- Core competencies:
 - Resilient telecommunication infrastructure
 - Partner agency coordination and mission alignment
 - Data network aggregation, extension of on-campus network across Oregon

Outcomes:

- Natural hazards monitoring, public safety products
- Research data

Sponsors:

- US Geological Survey
- BLM, USFS
- State of Oregon

Welcome to the Oregon Hazards Lab

Using Science, Technology, and Community Engagement to
Understand, Detect, and Mitigate Multi-Hazards within the
Pacific Northwest



The Oregon Hazards Lab at the University of Oregon



UNIVERSITY OF
OREGON

Operational workflow

Data generation



Data network transit



Data processing & Data products



Real-time, enduring data collection

Key factors:

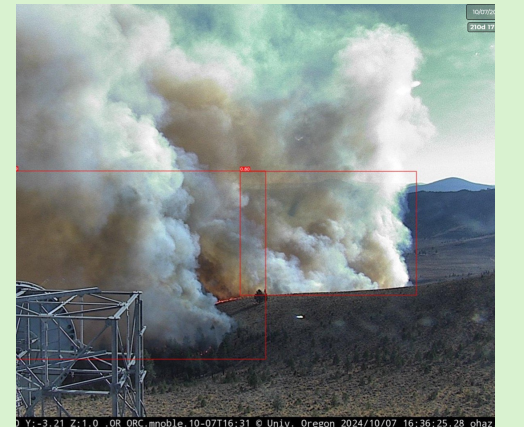
- Constant, perpetual, reliable data essential (it is always earthquake season)
- Performance during stress is essential (pending disaster, post-disaster)



- **Reliability** – link must be persistent
- **Robustness** – links must be strong
- **Resilience** – links must recover quickly

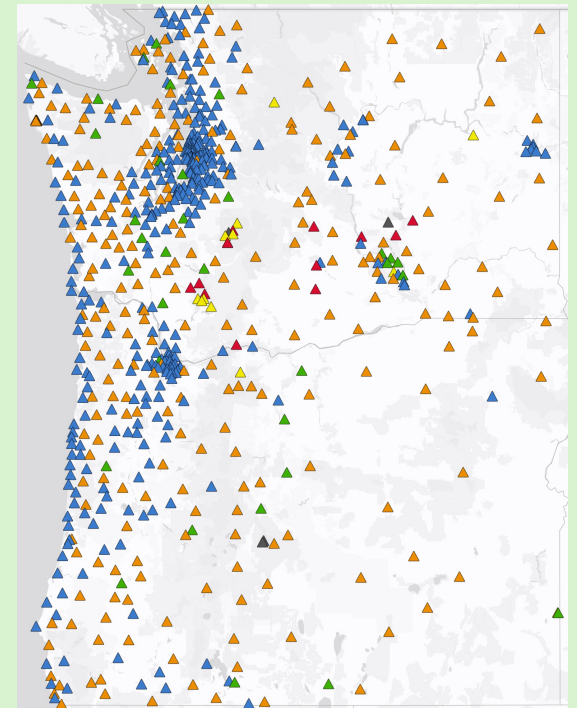
Achieve “three Rs” by:

- federating existing networks
- adding new links and redundancies
- monitoring network performance
- ability to enact field response

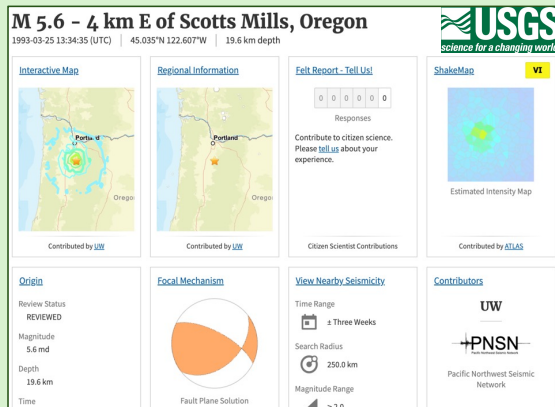


Seismic monitoring

- Not a matter of IF, but WHEN
- Seismic network – PNSN authoritative network
 - 250+ stations, aggregate network backhaul
 - ODOT State Radio Project, LinkOregon, FirstNet
- Essential products
 - Rapid, accurate post-event summaries.
 - ShakeAlert earthquake early warning. Immediate detection and warning.
 - Open source data – scientific discovery...

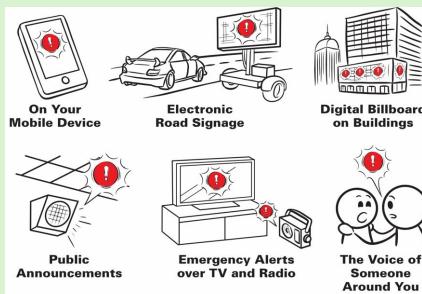


Seismic station map, PNSN



1993 Spring Break quake event page

Shake!lert™



System live in Oregon since 2021



Earthquake early warning success story

Medford 549c School District

Shake!Alert™



Wireless Emergency Alert

Did you know our schools were notified of the earthquake almost a minute before phones went off? That's because of our investment in the shake alert system and a powerful reminder that every second matters during a serious earthquake. 🕒

Our schools executed their response flawlessly, proving the value of our safety drills.

As the first K-12 school district in the state to adopt Shake Alert—and one of the only in our region—we're feeling grateful and proud of this critical step in keeping our students and staff safe. ❤️

[#SafetyFirst](#) [#ShakeAlert](#)

I witnessed this first hand. I was visiting Kennedy Elementary when they got the alert first and then all cellphones went off. I was impressed with that and how quickly staff and students went into action. I didn't know our schools had that! Thank you for doing whatever you can to keep our children and staff safe.

Social media callout

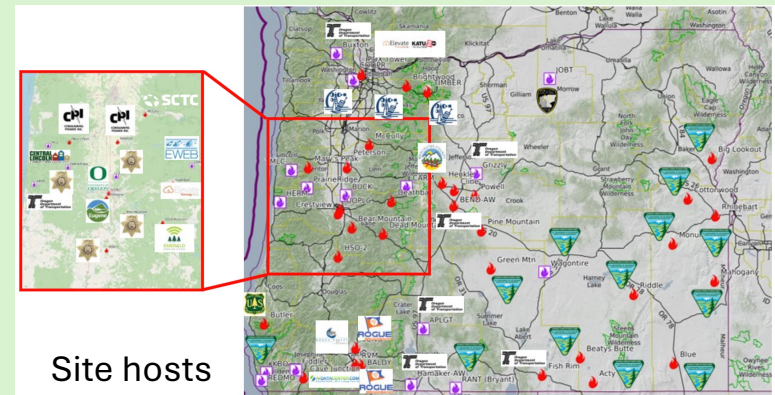
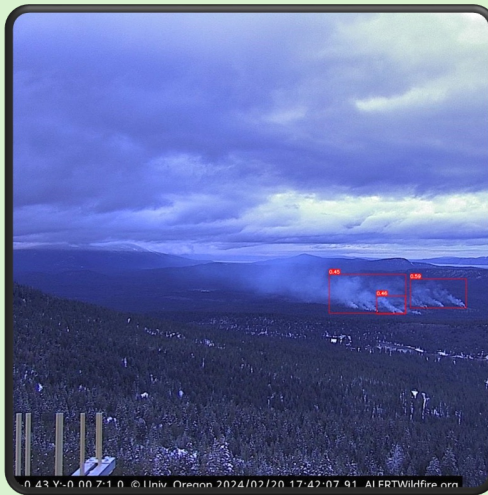
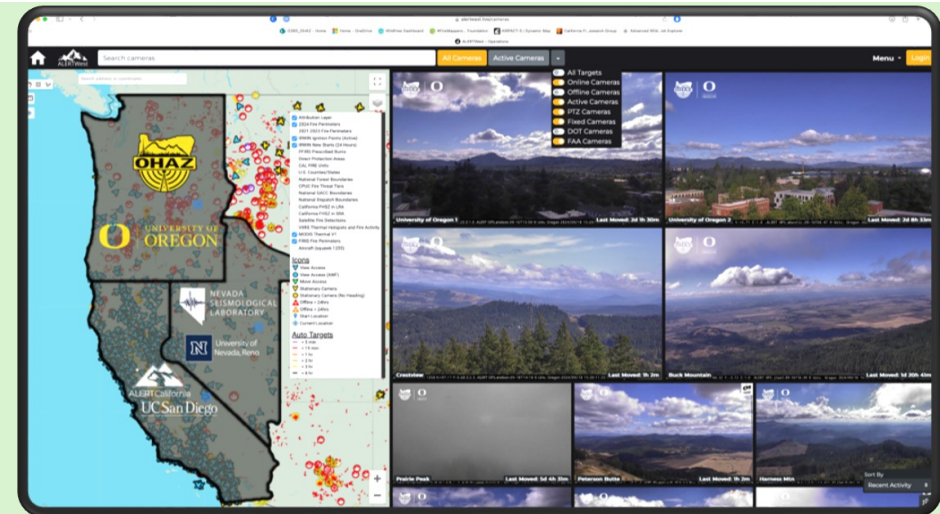


I5 9:50 AM on September 8, 2020



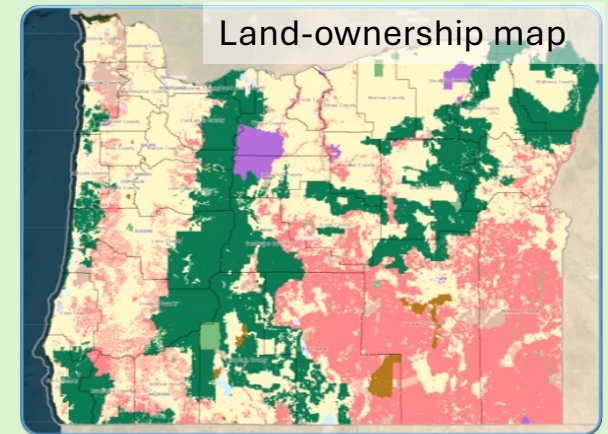
Fire monitoring

- Wildfire cameras serve as tools for fire response and public awareness
- OHAZ expanded from seismic into fire through initial BLM funding
- State of Oregon investment expanded program, unlocked new federal and private sponsorship
- Private + Public, Partnering with ALERTWest
 - 1800+ cameras in western US, integrated TripCheck and FAA cameras, seamless w/ Watch Duty app
 - Complete AI-enabled wildfire intelligence platform



Statewide fire detection system

- Founded by ODF and DFPA in 2009, primary focus on private and state forests
- In 2026...multiple operators, stakeholders, and sponsors
- Camera interop committee (OWDCIC) has coordinated activities since 2022
 - Key outcome: UO and ODF have completed an MOU committing to coordination



Memorandum of Understanding:

Oregon Department of Forestry – University of Oregon, Oregon Hazards Lab
Collaboration on Hazards Detection and Monitoring

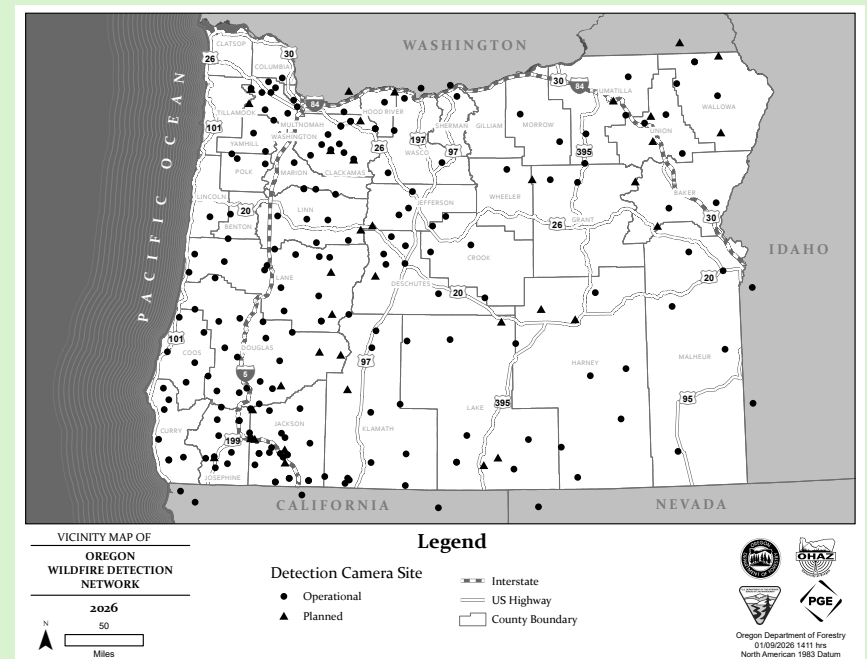


Executive Summary

The Oregon Department of Forestry (ODF) and the Oregon Hazards Lab at the University of Oregon (OHaz) define a statewide collaboration to improve preparedness, monitoring, and response to natural hazards by aligning operations, research, and practices. This MOU

Complementary relationship, joint needs:

- OHaz drives innovation and technology adoption; fire agencies utilize tools for fire response and management
- OHaz and ODF share the need to stabilize funding for ongoing costs
- Initial buildout target not yet reached (2024 SCIP)



Collaboration for statewide impact



UNIVERSITY OF
OREGON

- Statewide role of UO – convene, aggregate, advance research and discovery, enable technology
 - OHAZ program is a statewide service that leverages partnerships to advance safety for all Oregonians
 - UO serves many roles in advancing state resilience
 - IROCE, CIAO, OCCoE, CRESCENT
- Partnerships are everything
 - State agencies – mission amplifiers, work efficiency
 - Federal agencies – policy alignment, funding match
 - Private sector – innovation, acceleration, funding

LinkOregon accelerates Oregon's productivity
Broadband connectivity is a necessity for economic growth and development



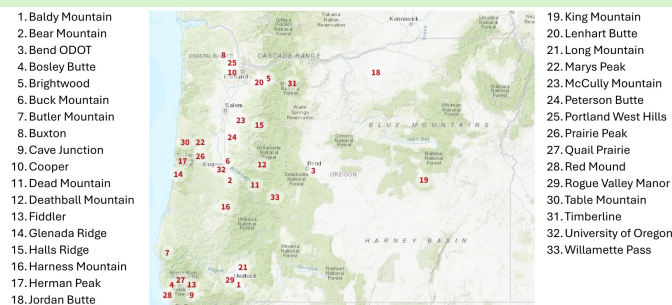
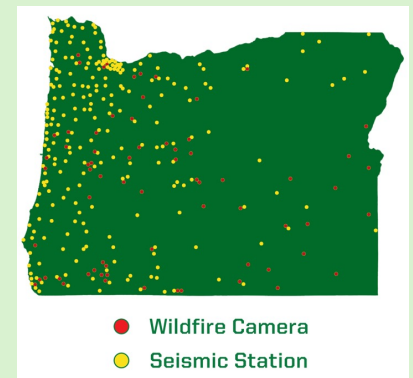
The Oregon Hazards Lab at the University of Oregon



UNIVERSITY OF
OREGON

Funding is needed to continue services through FY27 and beyond to:

- Continue operation of 33 fire cameras
- Preserve and restore staffing
- Protect the capital investment of State
 - Maintain forward momentum of partnerships
 - Complete works in progress



Camera sites at risk

