# Oregon Department of Forestry's Wildfire Detection Camera System

## EnviroVision Solutions (EVS) Forest Watch

**The Oregon Department of Forestry (ODF) and the three Forest Protective Associations (FPAs) operate the wildfire smoke detection system known as EVS Forest Watch. This system was piloted by the Douglas Forest Protective Association in 2006, adopted by ODF's Southwest Oregon District in 2013 and implemented across the Eastern Oregon Districts in 2019. The system provides early fire detection and ready deployment of fire suppression equipment and personnel.**

### EVS Forest Watch

Initially designed to replace the state's aged network of forest lookouts.

The EVS system currently consists of 86 operational cameras on 64 mountaintop sites (some sites have more than one camera installed to alleviate blind spots, to provide for backup systems or to provide security views). **Five of these sites were operational for fire season 2022 thanks to SB 762 funding.**

Another 7-10 camera sites are expected to become operational by the end of the biennium with 20 additional sites planned in southwest and eastern Oregon into the future.

### Technology

EVS Forest Watch camera equipment features pan, tilt and zoom technology with 360° view capability.

The software detects tiny changes in camera imagery (color, texture and movement) at the pixel level, resulting in an alert to the viewer. It then utilizes known landmarks and ridgelines to accurately geo-locate and pinpoint fire location. EVS technology doesn't reply on multiple tower sites to triangulate.

Highly trained detection camera lookouts identify the type and size of fire (by color of smoke, density and size of column) and begin immediate deployment of fire suppression resources.

Information can be relayed to first responders and fire managers via text, camera imagery and GIS data layers directly to tablets, laptops and mobile devices in the field to personnel in engines and in aircraft.

Dispatchers can relay weather and responder updates, provide turn by turn instructions and inform responders of changes in fire size and intensity in real time.

### Funding

The EVS Forest Watch camera buildout has been funded by a variety of sources:
**Private**: Landowner funding partnerships at the base budgeting level of protection for both FPAs and ODF
**Federal grants:** USFS, BLM and Congressional
**Local Government and Other:** County, NGO and nonprofits have made investments. Tribal governments and the utilities have also expressed interest in making investments.

The passage of **Senate Bill 762** in the last legislative session allocated $2.25 million dollars for system expansion

**Capacity:** A dedicated Project Manager position was added to oversee the system as were engineering staff to handle the practical build out.

**Build Out:** SB 762 funding will add an additional 15 new mountaintop sites by the end of the biennium.

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**The EVS Forest Watch system's mission is the early detection of fires to affect quick and informed initial attack response. This is the only camera system tied to both monitoring and the deployment of fire attack resources.**

### Detection & Monitoring

There are five Detection Centers located across southwest and eastern Oregon. These monitor cameras for six ODF districts and three Forest Protection Associations.

**Douglas FPA Detection Center,** located in Roseburg, monitors their own cameras as well as *Coos FPA*, and *ODF South Cascade* and *Western Lane districts.* DFPA pioneered the use of detection cameras in wildland fire response and are currently testing the use of FLIR cameras for nighttime detection.

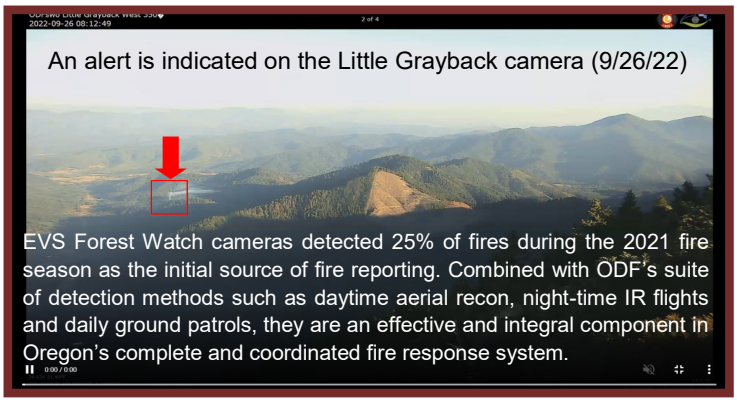
**ODF Southwest Oregon Detection Center** located in Medford monitor their own cameras in the busiest fire district in the state. Lightning events can generate dozens, even hundreds of fire starts, which are monitored and dispatched directly from the SWO dispatch center.

**ODF Central Oregon Detection Center** located at the Central Oregon Interagency Dispatch Center in Redmond monitors their own cameras for ODF's largest geographic District. They collaborate closely with USFS and BLM partners at this interagency center in mutual response.

**ODF Klamath-Lake Detection Center** located in the Lakeview Interagency Dispatch Center monitors their own cameras as well as those of *Walker Range FPA.* In the Klamath county WUI and high desert region, they work closely with Federal partners as well and Rangeland Associations.

**ODF Northeast Oregon Detection Center** located in LaGrande is the newest center, coming online for fire season 2022. They monitor their own district cameras and will be relocating in 2023 to the Blue Mt. Interagency Dispatch Center to leverage federal partnerships and response solutions.

The Klamath-Lake Detection Center




### Response Solutions

The EVS Forest Watch platform works with the FireWeb service that allows for seamless, web-based services and provides for advanced dispatching tools.

**Web-based:** Allows for a speedy user interface, online viewing of alerts and complex GIS data and allows for viewability of camera imagery on a variety of platforms.

**Enhanced Dispatch:** Provides resource tracking, access to pre-planning such as dispatch blocks, entry of known events such as prescribed burning, text messaging and weather information.

**Response:** All FPA and ODF detection centers are co-located within agency or interagency dispatch centers. Specially-trained detection staff coordinate closely with dispatch staff to provide real-time information to responders such as weather and smoke changes, responding agency updates and detailed GIS information, enhancing initial attack resource deployment.

These dispatch centers have immediate access to a suite of state and federal response equipment and are directly responsible for the deployment of both ground and air resources.

### A Statewide Solution

ODF participates in the **Oregon Wildfire Detection Camera Interoperability Committee**, an interagency coalition of wildfire response and emergency agencies. Focused on building relationships and collaborating in policy, technology and funding sources, this group is committed to developing and maintaining a coordinated statewide wildfire detection system for all of Oregon.