# Firefighters get a hand from technology to fight wildfires

**By BRAD CARLSON** Capital Press

BOISE — From inside the National Interagency Fire Center at the Boise Airport, meteorologist Nick Nauslar evaluated a wildfire burning 1,100 miles away in southern New Mexico.

Using the Visible Infrared Imaging Radiometer Suite and Moderate Resolution Imaging Spectroradiometer, he peered into the heart of the wildfire from satellites orbiting the earth 22,300 miles straight up. The arsenal of sensors let Nauslar track the size and movement of the fire, find hot spots and assess the weather and its impact.

"It's not showing heat in the last 24 hours, due in part to weather," he said.

The real-time information was helpful in seeing the fire and forecasting its behavior, Nauslar said. It would also be updated using ground reports and aerial mapping.

He used the system to help fire managers understand the fire and to track whether and where it was spreading.

"In fire, there is a lot of data you have to look at, and it comes from multiple sources," said Nauslar, who is in his 12th fire season. "So you are trying to ingest all of this data, aggregate it, organize it and apply it - one of the most important



Idaho Department of Lands/Contributed Photo A Fire Boss single-engine air tanker makes a drop.

and difficult aspects of our job."

Technological advancements help wildfire forecasters, incident commanders and land managers as they race to join the battle that rages across the West every summer. The progress is welcome — and needed in light of larger fires, longer seasons and new urgency in determining how to manage fire-prone landscapes. Last year alone, 52,113 wildfires burned 89 million acres, most of it in the West.

"Technology has helped us in preparation, planning and communication," NIFC Public Affairs Specialist Carrie Bilbao said. "We're using technology

for forecasting," she said. "Then you have fire behavior analysts that will go out basically working with the situation unit to help prepare them for what is expected. They look at fire behavior and potential."

#### **Space force**

At the U.S. Forest Service's multi-location Rocky Mountain Research Station, Jeffrey Morisette, Frank McCormick and Sara Brown are among the many scientists who work with the latest technology for

tracking and understanding the nature of wildfires.

"A theme is more integration of these geospatial tools," said Morisette, the human dimensions program manager. Higher image resolution, more frequent data and enhanced capability to link new and historical data and models are examples.

The same sensors farmers use in precision agriculture can help scientists like him figure out what the fuel loads are, he said.

"We are still learning the best possible ways to utilize that information and are making gains there," Morisette said.

McCormick, who is the air, water and aquatics program manager, said tools that analyze fire and ground conditions are important, "and access to high-speed communications means people on the ground can run them from (computer) tablets."

McCormick said the Water Erosion Prediction Project has been used to identify areas prone to erosion in forests in the U.S. and internationally. "and you can do model runs anywhere in the world if you have computer access."

Drought, the number of consecutive days between rain storms and the condition of wildfire fuel are among the aspects that technology can help monitor, he said.

Keeping fire crews on the ground safe is especially important. In a system called WildfireSAFE, remote sensors provide information on weather, hazards and fire behavior. It is used to increase firefighters' situational awareness and help them avoid risk.

#### **Airplanes and drones**

Satellites and sensors are not the only tools in the toolbox of 21st century wildfire fighters. Airplanes and drones help them track and extinguish blazes

In Idaho, for example, the

state Department of Lands contracts for a Fire Boss single-engine air tanker for fire suppression and uses drones for tracking fires. The plane is a cousin of the Air Tractor used by many aerial applicators in agriculture.

The department often deals with smaller fires near communities.

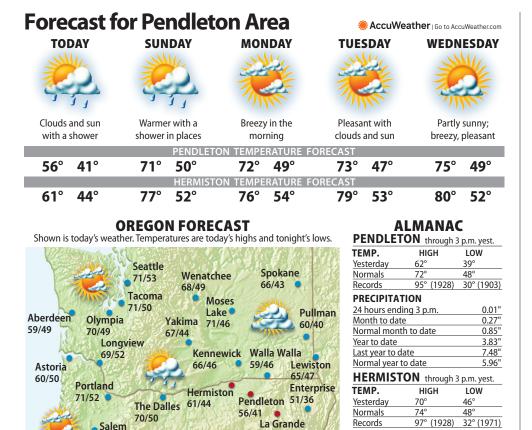
"When you have a fourtenths-acre fire that can burn down two or three homes, it won't pop up" on satellite imagery, Deputy Chief of Plans Scott Hayes said. IDL often cooperates with local fire departments.

Drones offer a solution to that satellite blind spot.

"The best imagery typically is taken early in the morning. You're trying to find hot spots, so you want the least amount of ambient temperature," Hayes said, referring to a drone-mounted infrared camera that "sees" heat.

He "flew" a fire in northern Idaho on May 6, "and it showed a hot spot outside the fire line," a concern. "We could direct people and resources accordingly."

Within a few minutes, "that image does you some good on the ground," Hayes said. Using it in conjunction with a mapping application "gives us the ability to create near-realtime aerial imagery" complete with exact locations.



## **Recent survey reveals growing** concerns over wildfire in Oregon

#### By MICHAEL KOHN Oregon Capital Bureau

SALEM — As wildfires seem to grow in number and severity each year, Oregonians are expressing greater concern for how wildfire affects their own lives.

A recent survey conducted by the Oregon Values and Beliefs Center found a strong majority of Oregonians see wildfires as "a somewhat or very serious threat" to residents of the state.

Respondents described challenges with managing the forests, as well as climate change that is drying out forest areas and making them more susceptible to wildfires.

The survey was conducted

threat to life and property. Most people expressed concern about wildfires affecting the people of Oregon rather than their own community (68%) or their family (58%).

Most Oregonians are also convinced that the number of serious wildfires will continue to rise. More than half said wildfires in the state will increase in both frequency (55%) and severity (53%).

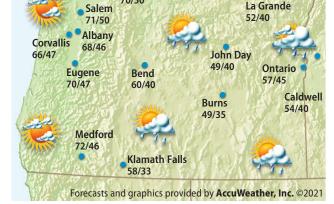
Beliefs that wildfires will grow in frequency and intensity are not tied to political beliefs, the survey found.

Even though liberals and conservatives have diverging viewpoints on the existence and causes of climate change, more than 85% of Oregonians of all social and economic three-quarters said they are a serious threat to their community (73%). This is a significant increase (19 and 17 percentage points higher) compared to people 65 and older.

Oregonians have more faith in private landowners compared to governments when it comes to preventing wildfire.

Around half of respondents (49%) think that private landowners are doing "very or somewhat well" at managing forests on their lands compared to 33% who say the state is doing "well," and 27% who say the federal government is doing "well."

Nearly two-thirds of Oregonians think that wildfires should be fought, even if they are far from homes and devel opment (72%). This figure is 7 percentage points higher than in August 2019, suggesting that the Labor Day fires in Oregon caused an increased urgency to fight fires.



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Normal mont	0.76"				
Year to date	1.47"				
Last year to d	1.38"				
Normal year	4.75"				
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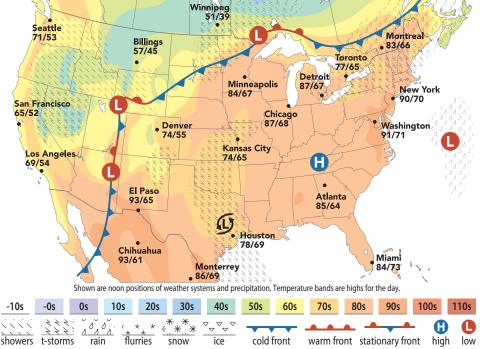
June 2

NATIONAL EXTREMES

Yesterday's National Extremes: (for the 48 contiguous states)

High 101° in Pecos, Texas Low 22° in Simms, Mont.

#### **NATIONAL WEATHER TODAY**



May 4-10, with 918 Oregonians responding. The survey has a margin of error of 2-3%.

Here are some of the hard numbers: Nine out of 10 (93%) Oregonians see wildfires as a somewhat or very serious

ideologies agree that fires are likely to become more frequent and more severe.

Two-thirds of young adults (aged 18 to 29) in Oregon said wildfires are a serious threat to their family (66%) and nearly

## IN BRIEF

### Wallowa-Whitman National **Forest names new district ranger**

JOSEPH — The Wallowa-Whitman National Forest will soon have a new district ranger.

Brian Anderson will take over the position later this month, according to a press release from Wallowa-Whitman National

Forest Supervisor Tom Montoya

"I am extremely excited to join the Wallowa-Whitman National Forest and become a part of the local community with my family," Anderson said. "I look forward to meeting stakeholders, hearing their perspectives, and working collaboratively to address a wide variety of

land management issues across the Wallowa Valley and Eagle Cap Districts and the Hells Canyon National Recreation Area."

Anderson currently serves as a deputy area ranger on the Sawtooth National Forest out of Stanley, Idaho. He has served in this position since 2017.

"The Wallowa-Whitman is fortunate to have a highly skilled leader joining our lead-

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ership team," Montoya said. "Brian brings some great experience in working with rural communities in Central Idaho and understands the impact that difficult resource decisions can have on local communities and

agency employees.' Anderson, who is originally from Boise, Idaho, has been a Forest Service employee

for more than 20 years, the release said. Anderson's background includes natural resources, an understanding of complex recreation issues and fire management experience. He has worked closely with a variety of stakeholders including partners, public, tribes and other federal agencies.

Anderson's past assignments in the Forest Service include serving as

acting district ranger on the Payette National Forest, acting area ranger on the Sawtooth National Recreation Area, hydrologist on the Boise National Forest, trail crew foreman and wilderness ranger on the Payette National Forest and as a wildland firefighter for the Idaho City Hotshots on the Boise National Forest.

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