

LOCAL, STATE & REGION

Satellites, drones, tech give wildland firefighters a hand

BY BRAD CARLSON
Capital Press

BOISE, Idaho — 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 a satellite-based instrument that collect visible and infrared images and other data, he peered into the heart of the wildfire from 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 and difficult aspects of our job.”

Technological advancements help wildfire forecasters, incident commanders and land managers as they race to join



A Fire Boss single-engine air tanker makes a drop.
Idaho Department of Lands via Capital Press

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



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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,” 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.”

For example, she said, “Maybe they need to put in a fire line farther down the road. That kind of involved forecasting helps them plan.”

While keeping up with the technology is challenging, Nauslar, the meteorologist, said he enjoys it. He pointed to the National Oceanic and Atmospheric Administration’s Geostationary Operational Environmental Satellite.

“You can see a cloud turn into a thunderstorm in real time. ... You can see a fire start and grow in real time,” he said.

Space force

At the U.S. Forest Service’s multilocation 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. 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.

On the ground

Tracking the locations of trucks, engines and other equipment also helps fire managers know what resources they have, and where.

Brian Williams is support services manager for the U.S. Bureau of Land Management’s National Fire Equipment Program. He said BLM Location Based Services aims to combine GPS technology with dispatch and suppression programs to enhance firefighter safety, give them more information about what’s happening with the fire and increase efficiency. Eighteen types of equipment, from engines, dozers and command vehicles to semi-trucks and crew carriers, comprise the fire-fighting fleet.

“We currently have 773 satellite terminals installed, and that covers our whole fleet,” Williams said. “Our program is currently focused on tracking the equipment that the firefighters use, and not specifically tracking the individual. In the future, our system could expand into tracking individuals.”

TODAY

It’s Friday, May 21, the 141st day of 2021. There are 224 days left in the year.

Today’s Highlight in History:

In 1932, Amelia Earhart became the first woman to fly solo across the Atlantic Ocean as she landed in Northern Ireland, about 15 hours after leaving Newfoundland.

In 1471, King Henry VI of England died in the Tower of London at 49.

In 1542, Spanish explorer Hernando de Soto died while searching for gold along the Mississippi River.

In 1868, Ulysses S. Grant was nominated for president by the Republican national convention in Chicago.

In 1881, Clara Barton founded the American Red Cross.

In 1910, a year-old Jewish settlement near the port city of Jaffa adopted the name Tel Aviv (Hebrew for “Hill of Spring”).

In 1927, Charles A. Lindbergh landed his Spirit of St. Louis monoplane near Paris, completing the first solo airplane flight across the Atlantic Ocean in 33.5 hours.

In 1941, a German U-boat sank the American merchant steamship SS Robin Moor in the South Atlantic after the ship’s passengers and crew were allowed to board lifeboats.

In 1955, Chuck Berry recorded his first single, “Maybellene,” for Chess Records in Chicago.

In 1972, Michelangelo’s Pieta, on display at the Vatican, was damaged by a hammer-wielding man who shouted he was Jesus Christ.

In 1979, former San Francisco City Supervisor Dan White was convicted of voluntary manslaughter in the slayings of Mayor George Moscone and openly gay Supervisor Harvey Milk; outrage over the verdict sparked rioting. White was sentenced to seven years and eight months in prison; he ended up serving five years and took his own life in 1985.

In 1982, during the Falklands War, British amphibious forces landed on the beach at San Carlos Bay.

In 1991, former Indian Prime Minister Rajiv Gandhi was assassinated during national elections by a suicide bomber.

Ten years ago: Shackelford won the Preakness, holding off a late charge from Kentucky Derby-winner Animal Kingdom to win as a 12-1 underdog.

Five years ago: President Barack Obama departed on a weeklong, 16,000-mile trip to Asia, part of his effort to pay more attention to the region and boost economic and security cooperation. The U.S. conducted a drone strike in Afghanistan that killed Taliban leader Mullah Mansour.

One year ago: President Donald Trump visited a Ford Motor Co. plant outside Detroit that had been repurposed to manufacture ventilators; he did not publicly wear a face mask but said he had worn one while out of public view. A Michigan judge sided with Gov. Gretchen Whitmer in a challenge by Republican lawmakers to her authority to order sweeping restrictions during the coronavirus outbreak. The government said nearly 39 million Americans had been thrown out of a job since the coronavirus crisis began. A sharply divided Senate confirmed John Ratcliffe as director of national intelligence. President Donald Trump’s former personal lawyer and fixer, Michael Cohen, was released from federal prison to serve the rest of his sentence at home because of the pandemic. Cohen would briefly return to prison in July, but was set free by a judge who said his return to prison was retaliation for his plan to release a book critical of Trump.

Today’s Birthdays: R&B singer Ron Isley is 80. Musician Bill Champlin is 74. Singer Leo Sayer is 73. Actor Carol Potter is 73. Former Sen. Al Franken, D-Minn., is 70. Actor Mr. T is 69. Music producer Stan Lynch is 66. Actor Judge Reinhold is 64. Actor-director Nick Cassavetes is 62. Actor Lisa Edelstein is 55. Actor Ashlie Brillault is 34. Country singer Cody Johnson is 34. Actor Scott Leavenworth is 31. Actor Sarah Ramos is 30.

—Associated Press

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