

OKLAHOMA DEPARTMENT OF AGRICULTURE, FOOD, AND FORESTRY

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Oklahoma Forestry Services participates in smoke exposure study

Oklahoma Forestry Services (OFS) firefighters are doing their part to help make wildland firefighters breathe easier in the future.

OFS firefighters recently volunteered to participate in a smoke exposure study that is based out of the U.S. Forest Service's Technology and Development Center in Missoula, Montana. A team from the center visited Oklahoma Forestry Services' East Central office in Wilburton and collected data from eleven firefighters while they conducted prescribed burns in surrounding areas. Prescribed burns are planned, controlled burns that utilize low-intensity fire to manage land, and provide an excellent environment for studying firefighters.

"Smoke inhalation is obviously a big issue for wildland firefighters and the more we learn about its effect, the safer we can make the job," said Oklahoma State Forester George Geissler. "We're pleased to have had the team from Missoula here and for our firefighters to have volunteered for such important research."

The five-year study is looking at the air inhaled by firefighters in relation to their activity during a work shift. Volunteers wear sensors and air filters that measure temperature and the amount of carbon monoxide and particulate matter being inhaled. The researchers shadow participants while they work to document their physical activities while they perform their duties.

Particulate matter collected in the participant's air filter is sent to a lab for processing, while all of the other data is downloaded onto a hard drive at the end of the day. Pulse oximetry is also used to obtain oxygen and carbon monoxide levels in the blood at various times throughout the day. This information is being collected from wildland firefighters across the nation in an attempt to better understand the impact of smoke on them and to develop practical recommendations to minimize the smoke effect.

Oklahoma is the first southern state to participate.

One unexpected result has already come from the study. Smoke exposure tends to be worse, not in the intense wildfire perimeter, but in the cooler "mop up" or clean-up stage when firefighters are digging up smoldering stumps and soaking hot spots. Oklahoma Forestry Services and wildland firefighters across the nation look forward to learning more.

About Oklahoma Forestry Services

Oklahoma Forestry Services, a division of the Oklahoma Department of Agriculture, Food and Forestry, is committed to conserving, enhancing and protecting Oklahoma's 12.5 million acres of forests and woodlands. Since 1925, Oklahoma Forestry Services has worked with individuals and communities throughout the state to create resilient landscapes, fire-adaptive communities and provide wildfire response. Headquartered in Oklahoma City, the division also has regional offices in Goldsby, Broken Bow, Wilburton and Tahlequah. For more information, visit <http://www.forestry.ok.gov>.

PHOTO CAPTIONS



1. A team of hot shot firefighters from the US Forest Service's National Training and Development Center in Missoula, Montana gathered research information on Oklahoma Forestry Services wildland firefighters. At the top, from left to right include Team Leader Andi Colson, Theo Johnson, Matt Kosovich and Jeff McEvers.



2. A researcher outfits Forester Craig Marquardt (left) with sensors and monitors to collect data.



3. Forester Craig Marquardt is outfitted with sensors and monitors and ready to perform a prescribed burn at Yourman Wildlife Management Area in Latimer County.



4. Forest Ranger Roger Kimble is checked for oxygen and carbon monoxide blood levels using pulse oximetry after several hours of working in fire and smoke.