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DHS PROVIDES PROTOTYPE NEXT-GENERATION PROTECTIVE CLOTHING TO FIREFIGHTERS BATTLING CALIFORNIA WILDFIRES

Firefighters begin trials of S&T's wildland fire advanced personal protection system

WASHINGTON, DC— The Department of Homeland Security's (DHS) Science and Technology Directorate (S&T) today launched a trial of next generation personal protective garments for wildland firefighters. More than 1,000 wildland firefighters from the California Department of Forestry and Fire Protection (CAL FIRE) units, the U.S. Forest Service, and 11 local California fire departments that are combating ongoing wildfires, will test the new equipment. S&T is conducting this wear trial in partnership with the U.S. Army Natick Soldier Research, Development & Engineering Center's National Protection Center (Natick).

"Today, fire departments face competing hazards where the personal protective gear that firefighters wear must balance the risk between severe burns and heat stress at the same time," said Bill Deso, S&T Program Manager. "With the hard work and support of our partners in California, the U.S. Forest Service, and Natick, the next generation of personal protective equipment will improve radiant thermal protection; reduce heat stress; improve form, fit, and function compared to existing garments; and meet National Fire Protection Association (NFPA) 1977 and 1975 standards."

Fire season coincides with the warmest months of the year when weather conditions, such as extreme heat and humidity, increase potential for heat stress. Firefighters also often respond to emergencies in remote areas and must hike long distances carrying heavy equipment from a staging area to the fire location. The new garment system is made of new fire resistant fabrics that is designed to reduce the threat of heat stress.

S&T and its partners produced more than 1,000 prototype garment systems and provided them to wildland firefighters who will wear them throughout the rest of the fire season – which is expected to last at least through October – to compare the performance of the prototype garments to their current systems.

The prototype garment system includes undergarments, socks, shirts, uniform pants, tactical pants, and over pants. The system has a shelf life of five years, allows for rapid donning in three minutes or less, is compatible with existing equipment, and accommodates the 5th to 95th percentile of male and female firefighters.

Wildland firefighters testing the gear will provide feedback to DHS through an online survey and their used garments will undergo laboratory testing to objectively determine their performance. Lab data and user feedback will be used to guide refinement and further development of the garment system before being transitioned to manufacture and ultimate commercial availability to the wildland firefighting community.

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