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For Immediate Release

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National Wildfire Coordinating Group Recommends Current Fire Shelter

BOISE, IDAHO – The National Wildfire Coordinating Group (NWCG) Executive Board concludes the current fire shelter continues to provide the most practical amount of protection given trade-offs of weight, volume (bulk), durability and material toxicity.

The USDA Forest Service initiated the Fire Shelter Project Review in 2014, in coordination with the National Wildfire Coordinating Group Fire Shelter Subcommittee (FSSC), to identify possible improvements to the fire shelter system wildland firefighters carry. During the last five years, the USDA Forest Service conducted an exhaustive search of materials and designs, working with 23 different entities that produced hundreds of different materials and combinations.

Fire shelter materials and designs were evaluated on weight, bulk, durability and toxicity that are critical for determining suitability for use in fire shelters. Suitable materials were tested in a small-scale flame test to determine material strength, durability, flammability, and thermal performance. Materials that showed promise in the small-scale test were then constructed into fire shelters and tested in a full-scale, direct flame test to measure the performance of the overall fire shelter design.

After hundreds of full-scale tests, four prototype designs were selected for wear testing by firefighters during the 2018 fire season. A total of 60 prototype shelters were produced for wear testing to expose any unforeseen issues with production, packaging wearing, and durability.

One prototype was lighter, smaller and performed better than the current shelter, but did not satisfactorily endure production rigors and was eliminated from consideration. One prototype style was tested by line-going firefighters, while two large shelters were carried by equipment operators only.

The prototype designed for line-going firefighters showed a 37-second direct-flame test performance improvement; however, it is nearly one pound heavier and has 1.7 times more volume than the current shelter. The prototype shelter envisioned for equipment operators is more than four times the volume and nearly 1½ pounds heavier.

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The FSSC weighed many facets of the fire shelter to determine the best option. These factors included increased physiological stress of carrying additional weight, reduced storage space in firefighters' packs, and the limited incremental increase in protection. Additionally, results of a firefighter survey showed a desire for a lighter weight/less bulky shelter. Finally, data showing a decreasing trend in the number of annual fire shelter deployments was also considered.

Since 2010, the current fire shelter has been used nationwide by all wildland firefighters and offers 54 seconds of survivability in lab tests. The current and previous versions of fire shelters have saved the lives of hundreds of wildland firefighters since the 1960s. Nationwide, in 2018, wildland firefighters deployed fire shelters on two separate incidents when they were caught in fire entrapment situations and both wildland firefighters survived without severe burn injuries.

Wildland firefighters are trained to consider fire shelters as a last resort and to avoid situations that can lead to entrapment. As with the current fire shelter, it is likely that none of the four new fire shelter prototypes can ensure survival in all wildfire conditions.

Additional information about fire shelters is available on the [National Interagency Fire Center website](#).

The National Wildfire Coordinating Group (NWCG) Fire Shelter Subcommittee is comprised of federal, state, and local wildland firefighters, wildfire safety specialists, fire management officers, and other fire shelter users. The [National Wildfire Coordinating Group](#) provides national leadership to enable interoperable wildland fire operations among federal, state, local, tribal and territorial partners.