

## Fire Shelter Project Update – October 2016

Fire Shelter information available at: [http://www.nifc.gov/fireShelt/fshelt\\_main.html](http://www.nifc.gov/fireShelt/fshelt_main.html)

### Shelter Material Search

- 21 companies have supplied material samples
- More than 150 material samples total
- Materials are still being submitted to MTDC

The U.S. Forest Service has entered into a collaborative agreement with the NASA Langley Research Center, located in Hampton, Virginia, to examine potential improvements to fire shelter performance. NASA and the U.S. Forest Service have found that there are common performance requirements between fire shelters and flexible heatshields that can be used to benefit both organizations.

North Carolina State University College of Textiles received a FEMA grant to initiate a project titled: Advanced Fire Blocking Materials for Enhanced Performance in Wildland Fire Shelters

### Fire Shelter Material Testing

The Fire Shelter Test Protocol is being used for testing material samples. Promising materials have been used to construct full scale fire shelters. Some of the shelters were tested in crown fire testing in the Northwest Territories of Canada as well as lab testing at the University of Alberta during the summer and fall of 2015 and 2016. The latest testing was conducted in September of 2016.

Until the September 2016 tests, the only materials that had a marked improvement in the thermal protective performance tests were those that were bulkier and heavier than the current shelter material. The recent testing has shown a few materials that show promise. More development work is needed before the materials are ready for use in a fire shelter. Material strength needs to be improved and packaging concerns need to be addressed.

### PVC Bag

Two recent entrapments, Beaver Fire in 2014 and the Valley Fire in 2015, showed an issue of the shelter PVC bag becoming heated then being difficult to tear open. The project review also includes working with the PVC film and bag manufacturers to create a PVC bag that will open more reliably as well be more durable from wear-and-tear. Alternative PVC bag designs will be field tested during fire season 2017.

### Fire Shelter Training

Fire Shelter Training Reminders 2015 is additional training information has been posted at the Fire Shelter website: [http://www.nifc.gov/fireShelt/fshelt\\_training.html](http://www.nifc.gov/fireShelt/fshelt_training.html) This information should be used to supplement current training.

### Fire Shelter Deployment Stories – Videos

In 2016, two additional videos of Fire Shelter deployments – Pagami and Holloway were added to the Wildland Fire Lessons Learned channel of YouTube. <https://www.youtube.com/user/WildlandFireLLC> The Beaver Fire story is being edited and will be added in 2017. These videos should be used to supplement current training.

In March 2016, a Fire Shelter Project Update was presented to the NWCG Executive Board and the Fire Management Board of the Forest Service and the DOI agencies. In October, both the NWCG Risk Management and Equipment Technology Committees will be given an update.