



Fire Science: Quick Takes

Australia's Stay and Defend Program

Research on building ignition has clearly shown that well-prepared houses can be successfully defended from bushfires and can offer shelter for people during the main passage of the fire front (see Cohen 2008 – reference below). It is also clear that late evacuations are one of the primary causes of death and injury in bushfires. These findings provide the foundation for the '**Prepare, Stay and defend or leave early**' policy, the focus of community bushfire safety strategies in Australia. This is a distinctive approach when compared with other international responses, where mass evacuation is the norm. Fire authorities encourage residents of bushfire prone areas to decide, prior to the start of each fire season, whether they will stay and defend their property from bushfires or leave well before the fire arrives in their area.

Supporters of the program say that the goal is to engage with homeowners to be active parts of the solution to interface fires, not just helpless victims in need of evacuation. The Australian approach encourages active preparation by residents before a fire occurs, and in the process is aimed at making them more aware of the risks of living in fire-prone areas. In addition, homes and property are better prepared when the fire occurs even if the residents decide to leave early.

The key to the program is a bushfire survival plan. All residents in fire-prone areas are encouraged to go through a risk assessment and planning process in order to prepare themselves well in advance for their response to an oncoming bushfire. The plan includes identifying actions to address risk and encourages people to develop a written plan that identifies all the actions they will undertake on high fire risk days.

First, residents must make the decision of whether or not to leave early.

"If planning to leave early, people must decide where they will go, how they will get there, and what trigger they will use to initiate their plan (for example, vulnerable family members may be relocated to a safer place on days of high or extreme fire danger, even if no fire is burning in the locality). People who plan to leave early must recognize that on days of very high or extreme fire danger, bushfires may break out nearby and spread at a rate that provides very little time to relocate." [Australasian Fire Authorities Council position paper 2006]

According Country Fire Authority program documents, if the decision is to stay and defend, a number of other questions must be thought through:

- Where you and other family members will be?

- What you will do if your children are at school when the fire starts?
- Who will look after your pets and/or livestock?
- What you will do if you have elderly relatives or young children living with you?
- How you will protect your property?
- How you will protect yourself?
- How you will know what is going on during the fire?
- What you will do to patrol your property after the fire front has passed through?

Regardless of the decision to stay or leave early, all residents in fire-prone areas are encouraged to prepare their property and homes for bushfire. Reducing ignitability of the home is one of the cornerstones of bushfire mitigation and the program provides residents with best practice information on housing construction and design, site location, as well as reducing ignitability of existing homes through vegetation management. For those who decide to stay and defend, the program also provides information on preparing to put out spot fires on the home using stand alone water supplies, hoses, and NOMEX clothing.

The program emphasizes that those who cannot, or those who believe they would not cope with a bushfire, should leave well before a fire impacts on an area. The program points out that late evacuation is one of the leading causes of death and injury in bushfires, and advises all residents, in fire-prone areas, even those planning to leave early, to have a strategy in place in case a fast-moving fire makes evacuation impossible.

The 'Prepare, Stay and defend or leave early' program is controversial, but it is one of the most innovative and comprehensive community fire outreach programs in the world. The program asks residents to take a hard look at their position on the landscape and to determine a decisive course of action to prepare for an eventual fire and for their response when the fire occurs. Whether one agrees with the premise that rural residents can defend their homes, it is difficult to argue with the value of this type of education and planning at the individual level.

More Resources:

Bushfire Cooperative Research Center - The Bushfire CRC has done extensive evaluations of the "Stay and Defend" program and resources can be found throughout their website, especially under the "Community Self-Sufficiency for Fire Safety" link under the "Research" tab.
<http://www.bushfirecrc.com/>

Country Fire Authority – Living in the Bush Survival Plan Workbook A comprehensive planning document available for download, designed to help residents assess their risk and then develop a bushfire mitigation and action plan. <http://www.cfa.vic.gov.au/residents/summer/litb-workbook.htm>

Structure Ignition – Jack Cohen is the world's leading authority on how bushfires ignite structures and he has written extensively about fires in the interface. A good place to start with Cohen's work is a recent article he wrote for Forest History Today – "The Wildland-Urban Interface Fire Problem"
<http://www.foresthistory.org/Publications/FHT/FHTFall2008/Cohen.pdf>

Advances in Fire Practice is a sub-site of wildfirelessons.net and is focused on bringing efforts and ideas to the forefront that leaders in the fire management, practice, and research communities have identified as innovative and widely applicable. It provides access to critical and proven fire information and resources. Advances in Fire Practice section can be reached directly by going to <http://www.wildfirelessons.net/AFP.aspx> or through the main Wildland Fire Lessons Learned Center website at www.wildfirelessons.net.

The Wildland Fire Lessons Learned Center actively promotes a learning culture for the purpose of enhancing safe and effective work practices in the entire U.S. wildland Fire community. It is located at the National Advanced Fire & Resource Institute in Tucson, Arizona.

