



# USDA Forest Service Fire and Aviation Management Briefing Paper



Date: July 2, 2013

## Topic: Fuel Treatment Effectiveness Success Stories – 2013

### Issue: The 2013 fire season provides more examples of Fuel Treatment Effectiveness.

As of July 2<sup>nd</sup>, only 24 Fuel Treatment Effectiveness assessments have been completed for 2013 with many more expected once the fire season quiets down (Mangers have 90 days after the fire is declared out to gather data and complete an assessment).

Of the Fuel Treatment Effectiveness assessments completed so far for the 2013 fire season:

- 100% of the fuel treatments tested by wildfire reduced fire behavior and helped the suppression effort. (Based on 2011 and 2012, we expect by the end of the fire season that this will be closer to 90%).
- About 70% of the fuel treatments were effective in helping keep wildfires less than 10 acres. Most of these occurred in the Southern and Southwest Region. (Based on past years, we expect by the end of the fire season this number will drop as larger wildfire assessments are completed).

Fuel treatments have numerous benefits including the following specific examples from early in 2013:

#### Fuel Treatments Aid Wildfire Suppression and Reduce or Avoid Structures Lost

- **Silver Fire, Gila NF, New Mexico.** Fuel treatments were used for a burnout operation that helped protect the community of Kingston NM. *“The significance of this previously constructed fuel break, built in 2003, was critical in the protection of Kingston. The fuel break allowed for quick handline to be built and then burned by the Midewin IHC on June 15<sup>th</sup> and 16<sup>th</sup>.”* Eliot Pickett, Structural Protection Specialist, Northern Arizona Incident Management Team

#### Fuel Treatments Increase Firefighter and Public Safety

- **Echo Fire, Kaibab NF, Arizona.** A fuel treatment slowed the spread of the wildfire allowing fire fighters to conduct direct attack safely, and keeping it out of the community of Williams, AZ. The fire started directly adjacent to dozens of homes, businesses, Interstate 40, and within the City project – a hazardous fuels reduction project around the community of Williams. At the time of the start of the fire, weather conditions were considered critical (NWS issued Red Flag Warning) and along with low fuel moistures there was potential for large fire growth. The reduction of surface and ladder fuels by the fuel treatments kept the fire from transitioning to a passive or active crown fire. This allowed crews the ability to do direct attack safely and successfully contain the fire at 1.4 acres. There was no spotting and smoke impacts to the Interstate and community were minimal. Smoke impacts to I-40 could have had major impacts and safety concerns.

## Fuel Treatments Restore Ecosystems and Landscapes and Increase Resiliency

- **Halfway Fire, Kaibab NF and Grand Canyon National Park, Arizona.** Past fuel treatments and wildfires managed for resource benefits helped keep the fire on the ground and helped fire fighters protect the community of Tusayan, AZ. *“Last week, thanks to quick action by Forest Service and Tusayan Fire District personnel, we dodged a potentially serious fire east of town. Thankfully prior fires and the treatment crews had done in the area before, also helped keep the fire from getting quickly out of hand. Thank you to the fire crews for their quick and effective work.”* Greg Bryan, Tusayan Mayor

## Fuel Treatments Change Fire Behavior

- **Section Fire, Kaibab NF, Arizona.** The fire started in a fuel treatment that had been thinned in 2009, which helped keep the fire out of the crowns and small (less than an acre). *“Because the small trees had been cut in this area, there was no torching. If thinning had not occurred, the fire may have been harder to control.”* Quentin Johnson, District FMO, Kaibab NF
- **Delgado 19 Fire, Umpqua NF, Oregon.** A fuel treatments completed in 2011 helped keep the fire out of the canopy. The fire behavior was similar to historic conditions, and assisted fire fighters in keeping the fire small (12 acres in size). *“What was notable about the treatment is no torching occurred.”* Brett Brown, District Fuels Technician, Umpqua National Forest
- **Timothy Hollow Fire, Mark Twain NF, Missouri.** The fuels within the fire area were greatly reduced by the previous year’s prescribed fire. Initial attack crews took advantage of the reduced fuel loadings to rapidly contain the wildfire.

### **Additional table**

Fuel treatments have been effective at changing fire behavior and helping with suppression in over 90% of the incidents where treatments are tested. Note: field units have 90 days after fire control to file their report. We expect hundreds more examples from the 2013 fire season.

<b>Summary of FS Fuel Treatments Effectiveness On Wildfires (As of 07/02/13)</b>									
<b>Number of Treatments Burned Over By Wildfire</b>									
<b>Year*</b>	<b>Did Treatment Change Fire Behavior?</b>				<b>Did Treatment Help Control Wildfire?</b>				<b>Total Records</b>
	<b>No</b>		<b>Yes</b>		<b>No</b>		<b>Yes</b>		
	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	<b>Number</b>	<b>%</b>	
<b>2006</b>	-	0%	10	100%	-	0%	10	100%	<b>10</b>
<b>2007</b>	5	2%	197	98%	2	1%	200	99%	<b>202</b>
<b>2008</b>	3	2%	152	98%	1	1%	154	99%	<b>155</b>
<b>2009</b>	15	15%	88	85%	9	9%	94	91%	<b>103</b>
<b>2010</b>	18	11%	139	89%	6	4%	151	96%	<b>157</b>
<b>2011</b>	51	11%	400	89%	66	15%	385	85%	<b>451</b>
<b>2012</b>	45	14%	266	86%	107	34%	204	66%	<b>311</b>
<b>2013</b>	-	0%	24	100%	-	0%	24	100%	<b>24</b>
<b>Total</b>	<b>137</b>	<b>10%</b>	<b>1,276</b>	<b>90%</b>	<b>191</b>	<b>14%</b>	<b>1,222</b>	<b>86%</b>	<b>1,413</b>

\*Reporting was optional until Dec 2010