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In Reply Refer To: 9214

August 31, 1999

Memorandum

To: State Fire Management Officer - 942

From: District Fire Management Officer

Subject: Escaped Fire Review - Wilson Gulch

On August 24th, 1999, a review was conducted of the escape on the Wilson Gulch Prescribed Fire. The review followed the guidance in "Standards for Fire Operations", Chapter 6 "Prescribed Fire" and Chapter 14 "Reviews and Investigations". Two copies of the report and results of the proceedings are enclosed. Forward one copy to the National Office of Fire and Aviation. If you require any additional information on the history of the Wilson Gulch Prescribed Fire which began in 1992 contact Ray Mitchell at (208) 886-7245.

Michael Ann

REVIEW OF
WILSON GULCH PRESCRIBED FIRE
8/24/99

I. INTRODUCTION

On August 24th, 1999, at 1000 Hours a review of the Wilson Gulch Prescribed Fire was conducted at the Burley Field Office. The following individuals were present at the review:

Karen Shilling	Acting Area Manager
Bernie Jansen	Operations Manager
Ray Mitchell	Fuels Manager
Michael Aoi	Assistant Fire Management Officer (Burn Boss)
Mark Wiseman	Assistant Fire Management Officer (Ignition/Holding Boss)
Greg Haxby	Fire Operations Supervisor (Burn Boss Trainee/Holding Boss)
John Augsburger	Wildlife Biologist
Ken Knowles	Environmental Protection Specialist
Paul Makela	Wildlife Biologist
Blaine Newman	Outdoor Recreation Planner
Kurt Pavlat	Rangeland Management Specialist
James Tharp	Ecologist
Monty White	District Ranger

The review was conducted in order to learn from the consequent escape of the prescribed fire on August 18th .

II. NARRATIVE

Michael Aoi laid the groundwork for the review and began with a chronological review of the events prior to the day of the escape, as identified in Attachment 1, Burn Boss Chronology. Greg Haxby then concluded the chronology from the time the firing operation was concluded until the time of escape, as identified in Attachment 2, Holding Boss Chronology.

Ray Mitchell reviewed the history of the Burn Plan (Attachment 3) and the history of the Wilson Gulch Prescribed fire which was started in 1992 and completed this fiscal year. Once Ray completed his review of the plan, the prescription parameters were addressed with the following question: Were the parameters, RH, temperature, windspeed, wind direction, live fuel moisture, adequate?

While the parameters for burning in juniper were quite wide with indices which would be considered high, the discussion by those present indicated that the prescription parameters were acceptable and necessary to complete a successful burn in the juniper. The parameters as identified in the plan were met during the execution of the burn.

The next item reviewed was the amount of forces specified in the plan. The group deemed that the forces as identified in the plan were acceptable depending on the situation. It was noted that the forces identified in the plan were the minimum forces and that consideration should be given to increasing the forces depending on the situation. However the forces on the day of the burn exceeded the forces required in the plan. There was some discussion on the amount of Holding

Forces which remained on the site after the firing operation and during the night since some of the forces returned to their base and returned the next day. Types of forces were also discussed such as the use of handcrews and dozers. However the use of dozer line would require updates to the current Environmental Assessment which does not address the use of dozers and the impacts.

The final item reviewed was the strategy. The current strategy is: to reinforce any current manmade barriers such as roads with burn out operations prior to interior lighting. Once the control lines are in place, fire the interior of the fire. The interior firing will be timed in order to take advantage of higher indices during the day but allow the fire to burn only a short period of time to take advantage of diurnal effect of evening and night. The preferred firing time would be around 1600 to 1700 hours during the latter part of August and the earlier part of September. This strategy also makes use of the contingency areas which are identified in the Burn Plan.

The current strategy is in response to the geographic areas determined by the Resource Area staff which in most cases are not adjacent to any manmade barriers such as roads and the current EA's do not address the use of dozers or the construction of said type of barriers. One point mentioned was a better tie with personnel in fire when composing and reviewing EA's. This would enable the Resource Staff to consider the pro's and con's of alternative types of implementation methods such as the use of dozers and incorporate those alternatives into the EA. Also the EA may not properly address the contingency areas which are identified in the Burn Plan.

The group discussed what could be done to mitigate the portions of the burn area which did not have a "hard" control line. Several options were discussed such as the use of dozer line, burning control line without a barrier, constructing hand line, and reevaluating the perimeter of the project to include roads, etc.

Weather and fire behavior conditions were also discussed by the group. It was noted that the weather conditions during the night of the August 17th were not optimal for the implementation of the holding strategy because of the low RH. However, the RH for the night of the 16th reached a high of 44% and on the 15th the RH reached a high of 56%, the two days when the control lines were constructed..

III WEATHER NARRATIVE

The general weather forecast for August 17th (see Attachment 4 Action Plan) indicated the following conditions: Sky/weather; mostly sunny: LAL; 1: Temperature; Lower 90s: Humidity; 15 to 30%: 20 Foot Winds; southwest 5 to 15: Haines Index; 5 Moderate. For the conditions at the night the following was predicted: Sky/weather; partly cloudy: LAL; 1: Temperature; 60s: Humidity; 25 to 35%: Wind; Gusty southeast 10 to 20: Haines; 5 Moderate. A spot forecast confirmed the general forecast with the exception of a Haines Index of 6 High for the day.

A review of the Goose Creek Remote Automated Weather Station (RAWS) on August 17th indicated that the maximum RH was at 26% at 0600 Hours (see Attachment 5, Goose Creek RAWS). The RH decreased significantly at 0900 Hours where the RH was recorded at 3%. The RH fluctuated between a low of 2% and 12% until 2200 Hours that evening. However, on-site observations by the Burn Boss indicated a reading of 14% at 1600 Hours, 18% RH at 1900 Hours, and 18% RH at 2200 Hours..

The temperature, according to the RAWS, reached a low of 53 degrees F at 0500 Hours in the

morning and peaked at 92 degrees at 1600 Hours in the afternoon. The temperature declined to 71 degrees by 2300 Hours.

The RH recovery for the morning of the 18th was less than the previous night and reached a maximum of 18% at 0400 Hours in the morning. RH decreased significantly at 0800 Hours where 3% was recorded. RH fluctuated between 3% and 13% during most of the day until 1900 Hours where a steady increase in RH began.

During the 18th, temperature varied from a low of 63 degrees at 0400 to high of 91 degrees at 1300 Hours.

Moderate indices were reported for the RAWS during the days of August 17th and 18th. Burn Index (BI) and Spread Component (SC) for the 17th were 58 and 27 respectively and on the 18th the BI was 61 and the SC was 29.

IV DAMAGES

At the time of this report the following damages were known:

1. The riparian area in the Cold Creek drainage suffered some intense burning conditions.

2. Two exclosures which were constructed by the Bureau of Land Management were consumed by the fire.

3. An unknown amount of fence which belonged to an adjacent landowner was burned by the fire. The amount and extent of the damage has not been totally identified at the time of the report however the estimate of the amount is from one to two miles.

The Resource Area is planning to evaluate the site during the week of August 30th.

V CONCLUSIONS AND ACTIONS

1. Conclusion: The parameters within the Burn Plan were conducive and acceptable. However a more concise identification of the Holding requirements would be desirable.

   Action: Developers of Burn Plans will expand the narrative on the Holding requirements.

2. Conclusion: Implementation equipment and personnel were adequate for the project as identified in the plan.

   Action: Burn Boss will consider additional resources commensurate with the situation.

3. Conclusion: The general strategy of; timing the implementation of the burn to coincide with favorable conditions during the year and day was acceptable.

   Action: Fire Managers, Burn Boss, and Resource Staff consider the advantages and disadvantages of burning later in the year.

4. Conclusion: The Environmental Assessment (EA) may not clearly define the role of the "Contingency Area".

   Action: Fire Managers and Resource provide better collaboration during the creation of the EA.

VI SUMMARY

The Burn Plan and the accompanying strategy were acceptable under the current conditions of the Environmental Assessment. More collaboration by the Resource Area and the Fire Management Staff in developing the EA is suggested for future projects. This will promote an exploration of other options and alternatives. Also more collaboration between the Resource Area and Fire Management in weighing the alternatives for the timing of burns in this fuel type. Also, a better identification of the Holding parameters should be identified in the Burn Plan. However at this time all burn plans are to follow a format which is more comprehensive in nature compared to the 1992 Wilson Gulch plan.

Policy, guidance, and procedures for prescribed fires on the unit appear to be adequate with the aforementioned suggestions on communication between the Resource Area and the Fire Management staff during creation of the EA and Burn Plan.