



# Appropriate Management Response (AMR) within Fire Program Analysis (FPA) MS\_008\_WP

Revised - February 11, 2008

## Introduction

Management responses to wildland fires vary widely depending on where and under what conditions fires occur. By policy, fires may be either managed for resource benefit or suppressed, using strategies and tactics that range from monitoring to full perimeter control. This paper addresses how fire planning unit (FPU) planners can represent a range of Appropriate Management Response (AMR) to wildland fires in FPA.

## Terms

### **Appropriate Management Response:**

Any specific action suitable to meet fire management unit (FMU) objectives. Typically, the AMR ranges across a spectrum of tactical operations (from monitoring to intensive management actions). The AMR is developed by using fire management unit strategies and objectives identified in the fire management plan.

[\(Interagency Strategy for the Implementation of Federal Wildland Fire Management Policy, June 2003, p. 17\)](#)

## Background

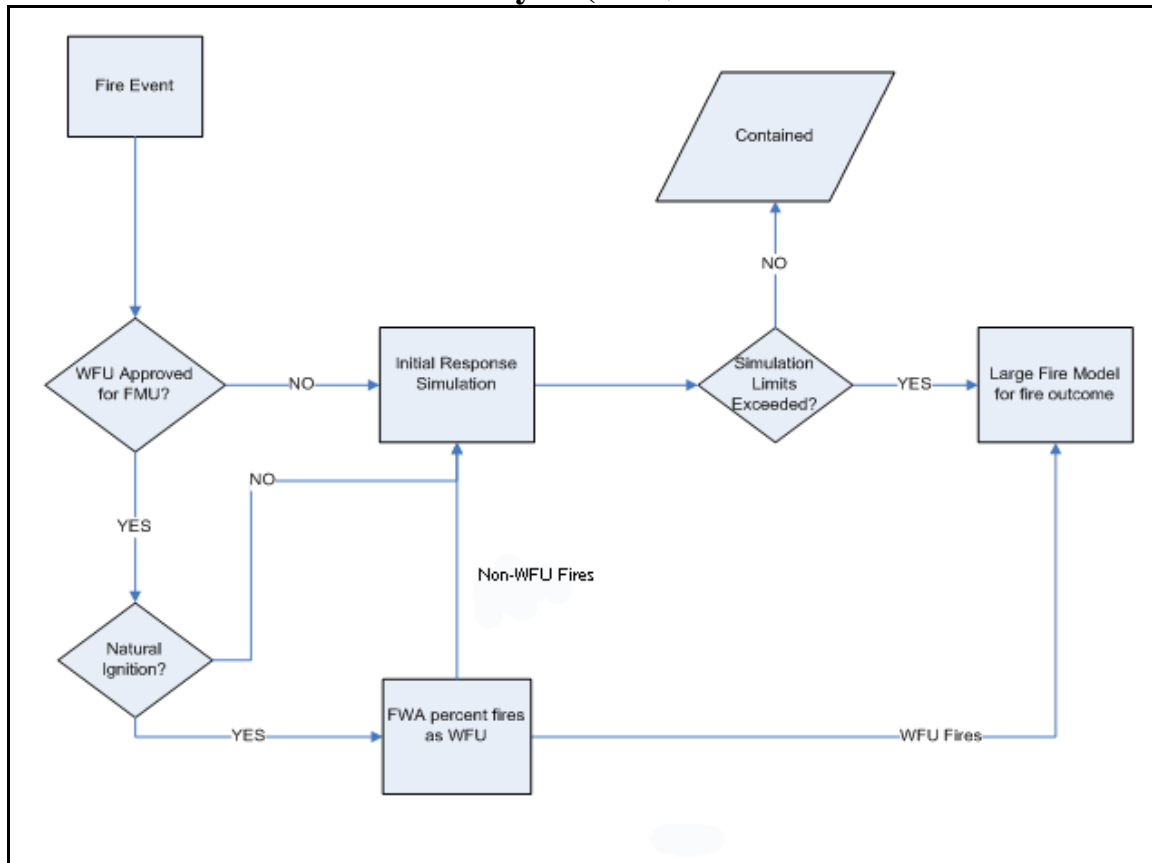
The FPA Scope document describes an application that will evaluate, among other things, the interactions among fuels treatments, wildland fire use (WFU), and fire suppression. Management responses to wildland fires range from monitoring (no suppression action taken) to full perimeter control (direct or indirect attack), depending on burning conditions, time of year, numbers of other fires burning, and potential damage to resources. Simulating a range of fire management responses in FPA allows planners to model more realistic strategies than just full perimeter control or simple monitoring.

## Approach

Wildland fires modeled in FPA are categorized as suppression or WFU depending on the FMU or Fire Workload Area (FWA) fire management objectives. Figure 1 displays the FPA AMR modeling process.



## Appropriate Management Response (AMR) within Fire Program Analysis (FPA) MS\_008\_WP



**Figure 1: FPA AMR Modeling Process**

When an area's fire management plan includes WFU, a fire planner may use FPA to model the effects of fire use. Planners specify by FWA the fires to manage as WFU using these filters:

- Burning conditions, and/or
- Percent of fires typically managed as fire use.

WFU events pass directly into FPA's Large Fire Module. All other incidents are categorized as suppression fires and enter the Initial Response Simulator (IRS). Suppression fires that are not contained before reaching user-defined IRS simulation limits are passed to the Large Fire Module.

Planners can model a wide range of potential management responses to fires using dispatch rules and escaped fire limits. Where WFU is not approved and heavy suppression responses are inappropriate, (because of low risk to resources, low potential for spread, or high risk to firefighter safety, etc.), FPA planners can direct the model to dispatch few or no firefighting resources. Planners also can adjust IRS size and time limits in low risk areas to allow fires to grow large over many burning periods before being considered "escaped initial attacks."



## Appropriate Management Response (AMR) within Fire Program Analysis (FPA) MS\_008\_WP

### Understanding Simulation Results:

- Fires that are modeled as WFU events are not included when a unit's initial attack success rate is calculated.
- WFU and suppression fires contribute to the burn probability predicted by the Large Fire Module. For WFU incidents, the effect of large fire suppression on fire size is turned off.
- Suppression fires and WFU incidents are assigned costs in the model based on historic suppression and fire use expenditures.

### Review History:

Date	Initials	Change Summary
February 11, 2008	DS	Final edits
January 30, 2008	KSH	Finalized edits.
January 29, 2009	GB	Added review comments.
January 7, 2008	KSH	Edited for clarity and readability.
January 4, 2008	GB	Initial Draft