

VI. Monitoring and Evaluation

VI.A. Monitoring Performance

Fire Behavior and Fire Effects Monitoring - The goal of the monitoring program is to provide fire and resource managers information necessary to better conduct fire management activities. Some uses of this information include:

- Make decisions regarding management strategy and tactics for all ignitions
- Compare actual prescribed fire effects with stated burn objectives
- Validate/refine current management prescriptions
- Assess the efficacy of management techniques
- Suggest improvements or alternatives to existing management techniques
- Identify concerns which require further research
- Guide future decisions pertaining to fire management

Monitoring related to wildland fire or fire related projects falls under the general monitoring and evaluation guidelines outlined in the various agencies LUPs. Site specific monitoring needs are identified in analysis for individual fire related projects.

Fire behavior monitoring is done to help make planning and immediate decisions, which promote firefighter safety and effective use of existing resources.

Fire effects monitoring may be divided into long and short term monitoring. Short-term monitoring will provide nearly immediate information regarding fire effects, serving as a feedback mechanism to assess and evaluate the degree to which fire management objectives are being achieved. Long-term monitoring will track changes in overall resource conditions over one or more complete fire cycles, as they are currently understood.

Short-term and Long-term Program Effectiveness Monitoring Objectives - Short-term monitoring requirements include pre-burn fuel moisture sampling conducted by preparedness staff members or designated fuels crewmembers. Pre-burn monitoring may include vegetative transects or establishing permanent photo points depending on the specific project objectives. Post-burn monitoring conducted by fire management staff or resource specialists includes similar activities as required by the project monitoring plan.

Resource specialists and fire management staff with GIS specialist support conduct long term monitoring at the agency level.

Procedures - Fire effects monitoring, both short and long term, will vary depending on criteria established by the land use plan. General guidelines can be found in the *Fuels Survey Data Dictionary User Manual*. The UCR FPU does not have a FPU monitoring plan, but agencies include monitoring requirements in implementation plans. Monitoring methods may entail the establishment of photo points, vegetation transects, plots or other scientific methods, which will assess the primary and secondary effects of either wildland or prescribed fire.

Timeframes - Fire behavior monitoring will occur at the time of the fire. Fire effects monitoring will occur starting immediately following the fire or vegetation treatment and may continue years later depending on the design and objectives of the project.

Funding - Current BLM National Office direction allows for both prescribed fire and non-fire treatment funds (2823/2824) to be utilized within one-year post fire or non-fire treatment and is designated for monitoring treatment objectives or specific protection objectives.

Responsibilities - Fire behavior monitoring is generally the responsibility of the incident commander or the burn boss of the incident. Monitoring related to fire effects is the responsibility of the district/unit and may be conducted by either/or fire management or resource management personnel.

Reporting Requirements - Reporting requirements for fire behavior monitoring are fairly uniform and concise in light of their immediate relevance. Short and long term reporting requirements vary widely depending on their purpose and the design of the monitoring protocols and procedures.

VI.B. Evaluating Performance

Project Level - Project level plans are evaluated to ensure that the treatment/action meets the purpose and need of the project.

FMP Level - Adaptability is of utmost importance to this FMP. As provided in H-1601-1 - Land Use Planning Handbook, the FMP allows managers seasonal and annual application flexibility, based on factors such as resources, weather and operational capability. For effective "adaptive management" (a feedback approach to management that uses monitoring results to plan future actions) land management agencies must rely upon a continuous process of interagency and public feedback to monitor the outcomes and consequences of the selected management strategies. Prior to each fire season, managers intend to analyze the cumulative effects of the previous fire seasons, examine monitoring results and incorporate new information into the management strategy. Adjustments (refining zone boundaries, authorizing a more conservative management approach based on the previous years' fire activity, changing the allowable burned acreage, border adjustments as counties and other agencies complete their FMPs, etc.) would not require amending the FMP but would be done through plan maintenance.

LUP Level - Overall FMP performance is reviewed as part of the LUP evaluation process. LUP evaluations use: staff reviews, various monitoring data and GIS analysis. LUP evaluations determine if decisions are being implemented, whether mitigation measures are satisfactory, whether there are significant changes in the related plans of other entities, whether there is new data of significance to the plan, and if decisions should be changed through amendment or revision. The results of evaluations are used by the agencies to determine if LUP decisions and NEPA analyses are appropriate.

VI.C. Reporting Accomplishments

The UCR FPU annually tracks accomplishments through the National Fire Plan Operating and Reporting System (NFORS), which is required by all federal agencies. The BLM also tracks accomplishments through the BLM management information system (MIS).