Appendix D

Taos Field Office Fire Management Program Summary

This section provides a brief overview of the fire management concerns in the Taos Field Office (TAFO) and the resource management philosophy that directs fire management objectives and strategies throughout the authority of this updated Fire Management Plan. This summary identifies the different vegetation types found throughout the field office and their corresponding Fire Regime Condition Class (FRCC), provides a brief summary of program objectives and strategies, and outlines management philosophy and recommendations for accomplishing identified objectives.

A. Fire Regimes and Fire History throughout the Taos Field Office

Covering the north-central and north-eastern portions of New Mexico, the TAFO encompasses a wide variety of elevation zones and geographic features which comprise a diverse array of vegetation communities. The Sangre de Cristo Mountain range of the southern Rockies, with its high elevation forests and woodlands, divides the rolling plains of native grassland and agricultural fields in the eastern half of the field office from the sagebrush and pinyon-juniper woodland dominated landscape of the Rio Grande Valley in the western portion. The majority of BLM lands in the TAFO are located in the Rio Grande Valley, where BLM ownership exists in larger and more continuous management blocks.
The majority of BLM lands in the TAFO currently include the following vegetation communities seen below in Table 1 with their associated Fire Regimes and Condition Classes.

Table 1

Vegetation Type	**Fire Regime (s)**	**Condition Class**	**Approximate % of TAFO**
1. Shrubland/grassland (Plain-Mesa Grassland/Great Basin Desert Scrub)*	I, II	2, 3	**30%**
2. Pinyon-juniper savannah (Open Conifer Woodland)*	I, II, III	2, 3	**20%**
3. Pinyon-juniper woodland (Closed Conifer Woodland)*	II, III, IV	2	**30%**
4. Ponderosa Pine Forest (Lower Montane Conifer Forest)*	I	2, 3	**12%**
5. Mixed Conifer + (Upper Montane Conifer Forests)*	III, IV	1, 2	**6%**
6. Riparian Areas (Southwest and Plains Forested/Shrub Wetland)*	IV	1	**2%**

*This is the bureau technical term for each vegetation community, see Appendix A for more details
+Includes even-aged stands of Aspen as an early-seral stage

Historically, fire return intervals in native grasslands, pinyon-juniper savannah and woodlands, and ponderosa pine forests were high to moderate in Northern New Mexico. Survey records from the middle to late 1800s for each fire management unit reveal the following common characteristics of the landscape from that time: Generally lower stand densities and more herbaceous ground cover, often described in terms of an area's suitability for livestock grazing. These historic conditions are not disputed but definitive conclusions can not be made as to the type and frequency of disturbance that was required to maintain historic conditions for all vegetation types. Strong evidence exists to suggest that native grasslands and the ponderosa pine (lower montane forests), were maintained primarily by a Fire Regime I with a fire return interval as short as 2-5 years (Baisan and Swetnam 1997, Fule et al. 1997), with even-aged stand regeneration of ponderosa forests accomplished through intermittent stand-replacement by disease or fire similar to that seen in a Fire Regime IV or V. The fire histories of pinyon-juniper woodlands and pinyon-juniper savannah are not as simple. Trees in these woodlands and savannahs are, in most places, increasing in density and expanding into adjoining sagebrush shrublands and grasslands, having negative effects on a variety of resources. Causes are thought to be a combination of fire exclusion, livestock grazing, and climatic fluctuations (West and Young, 2000). Common opinion dictates that fire was frequent enough in

these vegetation types, before exclusion, to have maintained low-density pinyon-juniper savannas and woodlands in some areas and to have prevented tree invasion into sagebrush and grasslands (Gottfried et al. 1995, West 1999, Brown et al. 2001). This was undoubtedly the case in some pinyon-juniper woodlands, however, evidence suggests that in some woodlands fire return intervals were very long with characteristics of a Fire Regime IV and V (Floyd et al. 2000). Based on current scientific opinion, it is likely that pinyon-juniper woodland types as a whole experienced a mixed severity, with high fire return intervals in some areas and high intensity/low frequency fires in other areas, a combination of Fire Regimes I, II, III, and IV. Ponderosa pine forests, grassland/shrublands, pinyon-juniper woodlands, and pinyon-juniper savannah are the most abundant vegetation type found throughout the TAFO. With Condition Classes in these vegetation types averaging a high 2 to low 3, a variety of important resource concerns hinge on the management of these vegetation zones, including but not limited to watershed health, special status wildlife species management, hazardous fuels reduction, livestock grazing, and protection of cultural values. Strategies in restoring areas to Condition Class 1 or 2 include prescribed fire, fire use, mechanical thinning, and herbicide use. The strategies used for each project should be based on the best available science and consider impacts to all resources effected.

Artificial disturbance methods, including mechanical thinning and herbicide application, may be the best alternative for management in some scenarios (ex. hazardous fuels reduction in the Wildland Urban Interface) however; it is the philosophy of the TAFO Fire Management Program to duplicate natural processes as much as possible in the restoration of different vegetation types found throughout the field office. Concern has been raised that proposals for restoration of pinyon-juniper ecosystems often omit a consideration of the role of fire (Brockway et al. 2002), and that national-level policy for fire management and woodland restoration is being guided by coarse-level classification of pinyon-juniper fire regimes (Frost 1998, Brown 2000, Hardy et al. 2000). Are alternatives to fire in affecting forest structure and ecosystem processes truly a sustainable alternative to improving forest health? No mechanical means of fuels reduction - grazing, timber harvest, thinning, or biomass utilization - can duplicate the unique ecological effects of wildland fire, such as soil heating, nutrient cycling, and alteration of community composition and structure (Leenhouts 1998). Kauffman et al., 1997, summarized this philosophy well in stating that “A basic tenet of ecological restoration is that the creation of form without function does not constitute ecological restoration”.

The 2001 Federal Wildland Fire Management Policy (Appendix C) directs agencies to achieve a variety of goals, the foremost being to provide for firefighter and public safety. All Fire Management Plans and activities must reflect this commitment. The policy further directs agencies to “achieve ecosystem sustainability” and identifies fire as “a critical natural process” that will “be allowed to function in its natural ecological role”. Following this directive, the TAFO Fire Management Program will aggressively explore opportunities to use prescribed fire for forest and rangeland management and use wildland fire as an agent of natural disturbance where safety and resource concerns allow.