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I. Introduction

A. Purpose

The purpose of the Amarillo Field Office (AmFO) Fire Management Plan (FMP) is to identify and integrate all Wildland fire management guidance, direction, and activities required to implement national fire policy and fire management direction from the following: Federal Wildland Fire Management Policy and Program Review-1995 and 2001; The Interagency Fire Management Plan Template; and A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Strategy Implementation Plan.

See Appendix A for a map of the Field Office and fire management units.

The Federal Wildland Fire Management Policy states that every area with burnable vegetation must have an approved fire management plan (FMP). This FMP is a strategic plan that defines a program to manage wildland and prescribed fires based on the approved land use plan. This FMP provides for firefighter and public safety; it includes fire management strategies, tactics and alternatives, and values to be protected. It addresses public health issues and is consistent with resource management objectives, activities of the area, and environmental laws and regulations.

This FMP identifies objectives and forms the strategy for fire and fuels management in the Amarillo Field Office (AmFO). In general, the overriding goals of the AmFO fire program are the protection of human life and property, firefighter safety, and the restoration and maintenance of fire dependent ecosystems.

This FMP addresses the full range of fire management activities. This includes fire planning, fire management strategies, tactics and alternatives, prevention, preparedness and education. It addresses the role of mitigation, post-fire rehabilitation, fuels reduction, and restoration activities in fire management.

Implementation of this FMP will provide a safe, cost effective fire management program in support of resource management plans through planning, staffing, training, equipment, and management oversight.

B. Relationship to Environmental Compliance

The Fire Management Plan (FMP) complies with land use decisions related to fire management which are contained in the Texas Resource Management Plan (RMP) as amended in April 2000. The FMP is considered to be an activity plan which is subordinate to the RMP.

In 2004, BLM completed the Fire and Fuels Management Plan Amendment / Environmental Assessment for Public Lands in New Mexico and Texas. This document amended nine resource management plans including the Texas Resource Management Plan. This amendment updated direction for fire and fuels management by (1) providing consistent fire management direction for fire and fuels management categories and broad levels of treatment; (2) providing general guidance for fire management needed to protect

resource values; and (3) revising RMP decisions that limited BLM's ability to conduct safe and efficient fuels management treatments.

The FMP implements decisions made in both the RMP and the Fire and Fuels Management Plan Amendment. The FMP does not make new decisions or change allocations. Future site-specific and project-specific proposals to implement the RMP decisions will require additional environmental analysis and compliance with relevant laws and regulations. If additional direction is necessary to implement fire management actions, it can be developed, analyzed and determined through a RMP amendment or activity plan update.

C. Collaboration

The AmFO has collaborated with the Potter County Fire Department and other divisions of local government in the Amarillo area, as well as with the National Park Service, Lake Meredith National Recreation Area, and Alibates Quarry National Monument in the development of this plan.

The concept of fire as a significant natural process appears to be well accepted by nearby landowners. All of the surrounding landowners are anxious to see prescribed fires conducted in order to eliminate the possibilities of a wildfire spreading to their properties.

The AmFO coordinates with the Texas Parks and Wildlife Department when planning prescribed burns. As part of the Fire and Fuels Management Plan Amendment / Environmental Assessment for Public Lands in New Mexico and Texas, consultation with the U.S. Fish and Wildlife Service (US FWS) resulted in a list of conservation measures to be followed during fire and fuels treatments as well as effect determinations for threatened and endangered species. As part of the Fire and Fuels Management Plan Amendment / Environmental Assessment for Public Lands in New Mexico and Texas (2004), the Texas State Historic Preservation Office was consulted but did not comment on programmatic fire and fuels treatments nor did the Governor's Office comment on any inconsistencies with state law and regulation.

D. Authorities

- Protection Act of September 20, 1922 (42 Stat. 857; U.S.C. 594).
- Taylor Grazing Act of June 28, 1934 (48 Stat. 1269; U.S.C. 315).
- Reciprocal Fire Protection Act of May 27, 1955(69 Stat. 66; 42 U.S.C. 1856, 1856a).
- Economy Act of June 30, 1932 (47 Stat. 417; 31 U.S.C. 686).
- The Federal Land Management and Policy Act of 1976 (FLPMA) (Public Law 94-579; 43 U.S.C. 1701).
- Disaster Relief Act, Section 417 (Public Law 93-288).
- 2001 Annual Appropriations Acts for the Department of the Interior.

- United States Department of the Interior Manual (910 DM 1.3).
- 1995 Federal Wildland Fire Management Policy.
- 2001 Updated Federal Wildland Fire Management Policy (1995 Federal Wildland Fire Management Policy Update).
- 1998 Departmental Manual 620 Chapter 1, Wildland Fire Management General Policy and Procedures.

II. Relationship to Land Management Planning/Fire Policy

The AmFO Fire Management Plan has been tiered to decisions contained within the Fire and Fuels Management Plan Amendment / Environmental Assessment for Public Lands in New Mexico and Texas (2004), and the Federal Wildland Fire Policy. These documents provide the basis for the development of fire management goals and objectives.

The FMP derives overall program guidance from the following:

- September 2006 “Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide” provides standardized procedures, specifically associated with the planning and implementation of prescribed fire.
- 2006 “Instruction Memorandum No. 2007-035 Prescribed Fire Management” Provides information on the BLM supplement to the Interagency Prescribed Fire Planning and Implementation Procedures Reference Guide.
- September 2000, “Managing the Impacts of Wildfires on Communities and the Environment.”
- October 2000, National Cohesive Strategy goal is to coordinate an aggressive, collaborative approach to reduce the threat of wildland fire to communities and to restore and maintain land health.
- December 2006, “Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment -10 Year Comprehensive Strategy” provides a foundation for wildland agencies to work closely with all levels of government, tribes, conservation, and commodity groups and community-based restoration groups to reduce wildland fire risk to communities and the environment.
- August 2002, “Healthy Forests - An Initiative for Wildfire Prevention and Stronger Communities.”

Goals Related to Fire and Fuels Management from the Resource Management Plan

- **Human Life:** Protect human life, both the public and firefighters. This is the single, overriding priority in fire management.
- **Property and Resources:** Protect human communities, their infrastructure, and the natural resources on which they depend. Other property and improvements will be protected.
- **Setting priorities among human communities, other property, and natural resources** will be based on the values to be protected, human health and safety, and the costs of protection. The risk of wildfire to communities and property will be reduced using the full range of options available to fire managers, including prescribed fire, wildland for resource benefit, and mechanical fuels reduction.
- **Ecosystem Sustainability:** Where possible, allow wildland fire to function as an essential ecological process and natural change agent in fire-dependent ecosystems.
- **Wildlife components, including Special Status Species (Federally Threatened, Endangered, Proposed, and Candidate Species, BLM Sensitive Species and State Species of Concern):** Protect, maintain, preserve, and/or restore habitats necessary for the conservation of species, and the ecosystems upon which they depend, to maintain viable and diverse populations of native terrestrial and aquatic species including special status species.
- **Vegetation components:** Improve ecosystem health and maintain or restore the range of ecological conditions in which native floral and herbaceous components thrived and evolved.
- **Cultural, Historical and Paleontological:** Protect high value cultural, historical and paleontological resources.

Natural and Biological Resource Objectives

- **Air:** Meet federal and state air quality standards through proper management of emissions.
- **Flora and Fauna– Threatened and Endangered Species:** Ensure that BLM actions will not reduce the likelihood of survival or recovery of any listed species or destroy or adversely affect or modify designated critical habitat to those species.
- **Water:** Meet Federal and State water quality standards and prevent degradation through Best Management Practices during and after fires and vegetative treatments.
- **Visual:** Meet established Visual Resource Management (VRM) class objectives through appropriately planning fuel reduction treatments. VRM will be a consideration for any post-fire erosion control and other burned area rehabilitation and restoration needs.
- **Public Lands Health:** Meet Standards for Public Lands Health through appropriately planning fuel reduction treatment projects. These standards will be considered for all

phases of treatment regardless of the environment the treatment is taking place in (grasslands, brushlands, woodland and forest).

Resource Use Objectives

Vegetation: Fire and fuels management and related actions will reduce the amount of forest, shrub, and grass lands that are characterized as Fire Regime Condition Class (FRCC) 2 and 3.

- Where fire regimes have been moderately to significantly altered from their historical ranges.
- Where there is a moderate to high risk of losing key ecosystem components.
- Where vegetative attributes have been significantly altered from their historical range.
- Where fire return frequencies have departed from their historical frequencies by more than one return interval.

III. Wildland Fire Management Strategies

A. General Management Considerations

Currently the Amarillo Field Office has no Preparedness Budget, fire equipment, fire cache or fire crews. The fire program is relatively small and consists mostly of prescribed fire. The Amarillo Field Office relies on the BLM, Albuquerque District Office to manage severity funding and the prescribed fire and fuels program. The Amarillo Field Office and the Lake Meredith National Recreation Area have entered into a Memorandum of Understanding (MOU LLNM-006000-2009-001 Appendix B) to initiate a relationship between the parties to establish an effective and efficient cooperative fire suppression organization for BLM and NPS for Federal lands common to the Amarillo Field Office and Lake Meredith National Recreation Area.

The Albuquerque District Fire Management Officer (ADO FMO) in cooperation with the Lake Meredith National Recreation Area Fire Management Officer (LAMAR FMO) is delegated the authority to act on behalf of the Amarillo Field Office Manager to coordinate prescribed fire and preparedness activities. The LAMAR FMO in cooperation with the ADO FMO is delegated the authority to act on behalf of the Amarillo Field Office Manager to coordinate suppression activities. (Appendix C).

The Amarillo Field Office is located within the Albuquerque Zone and is serviced by the Albuquerque Interagency Dispatch Center (NM-ABC). The Amarillo Field Office, represented by the Albuquerque District FMO participates in the interagency coordination of wildland fire operations. The Cibola National Forest, El Malpais National Monument, Lake Meredith National Recreation Area, Southern Pueblos Agency, State of New Mexico, Zuni Agency and the City of Albuquerque are representatives of the Albuquerque Zone Board. The Albuquerque Zone Board coordinates interagency efforts on fire prevention and education, dispatching, training, fuels management, suppression, rural fire assistance and preparedness. A steering group made up of agency line officers meets regularly to guide the operations of the Albuquerque Zone Board.

The Albuquerque Zone Board and the interagency approach it represents is guided by the 2001 update of the 1995 Federal Wildland Fire Management Policy, the Wildland and Prescribed Fire Management Policy, the Implementation Procedures Reference Guide, the Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment and the 10-Year Comprehensive Strategy. Currently, this committee will represent the participating federal agencies and will provide local governments the assistance necessary to address wildland fire management issues.

The fire management program is based on a foundation of sound science. Research will support ongoing efforts to increase our scientific knowledge of biological, physical and sociological factors. Information needed to support fire management will be developed through an integrated interagency fire science program. Scientific results of these efforts will be made available to managers and will be used in the development of implementation plans.

AmFO has on-going relationships with West Texas A&M University to conduct vegetation and fire effects research. These studies will help determine what the natural/historical fire frequency should be in the Texas panhandle ecosystems, and will help refine prescribed fire prescriptions.

B. Wildland Fire Management Goals

The goals of the Fire Management Program are:

- Firefighter and public safety are the highest priority in every fire management activity.
- Identify appropriate management response (AMR) goals, objectives, and constraints by specific Fire Management Units (FMU) within the Amarillo Field Office. All wildland fire management activities will be managed as described in the FMU guidance outlined in Chapter III, section D.
- Allow wildland fire to protect, maintain and enhance public resources, and as nearly as possible, be allowed to function in its ecological role when appropriate for the site and situation.
- Create an integrated approach to fire and resource management across the landscape and agency boundaries. This approach will be designed to meet the desired outcomes of Land and Resource Management Plans.
- To provide a program that fosters interagency interaction, cooperation and effectiveness for all fire management activities. The program should be evident within all levels of the agencies, cooperators, and other public entities.

C. Wildland Fire Management Options

Fire Suppression

The Fire and Fuels Management Plan Amendment established four categories of Fire Management Units (FMUs), which provide land managers and the public a method of understanding the general fire management goals for each FMU. These categories are:

Category “A” Areas where fire is not desired at all.

Category “B” Areas where unplanned wildland fire is not desired because of current conditions.

Category “C” Areas where wildland fire is desired, but there are significant constraints that must be considered for its use.

Category “D” Areas where wildland fire is desired and there are few or no constraints for its use.

Two of the categories are used for the BLM FMUs in the AmFO:

Fire management specialists in concert with resource specialists from other disciplines within the AmFO determined fire management categories, management objectives and the appropriate management response for each of these FMU’s. The fire management categories are as follows:

- Category C - Areas where wildland fire is desired, but there are significant constraints that must be considered for its use.

Fire is a desirable component of the ecosystem, however, ecological, social or political constraints must be considered. These constraints could include air quality standards, threatened and endangered species, identified cultural, archeological, or historic resources or wildlife habitat considerations. Mitigation programs should focus on potential threats to values before ignitions occur and the reduction of unwanted human ignitions.

Ecological and resource constraints along with human health and safety factors are considered in determining the appropriate management response. This is performed on a case by case basis by the incident commander or line officer. Areas in this category would generally receive lower suppression priority in instances where multiple wildland fire situations arise than would B areas.

Cultural Resource Surveys, private land owner agreements and Fuels Reduction treatments such as prescribed fire and non-fire fuels treatments, may be utilized to ensure these constraints are met. These methods also may be used to reduce any hazardous effects of an unwanted wildfire.

FMU’s categorized as C are West Amarillo Creek, Ranch Creek, and Horse Creek.

- Category D - Areas where an unplanned wildfire and planned prescribed fire may be used to achieve desired objectives. Objectives could include improving herbaceous

components and improving wildlife habitats or watershed conditions.

These areas offer the greatest opportunity to take advantage of the full range of options available for managing wildland fire under the appropriate management response. Health and safety constraints will apply. Wildland Fire for Resource Benefit considerations similar to those described for category C may be identified if needed to achieve resource objectives. Areas in this category would be the lowest suppression priority in a multiple wildland fire situation.

There is generally less need for hazardous fuel treatment in this category. Prescribed fire for hazardous fuel reduction is not a priority except where there is a threat to resources or public safety. If treatment is necessary, both fire and non-fire treatments may be utilized, as allowed by the resource management plan.

The majority of BLM lands within the AmFO fall into this category. Prescribed fire will be used to obtain desired resource/ecological conditions where appropriate and the plan will implement programs aimed at reducing unwanted human-caused ignitions, as needed.

For all FMU's suppression objectives including the target acreages were defined by the following criteria: the fire intensity level fire (FIL) that would be expected within the FMU, the size of the public land and its proximity to private inholdings, the FMU's level of use by the public, the FMU's proximity to private residences and communities, the FMU's resource values, the FMU's historic fire regime, and the unique biological, cultural, historical or archeological resources within the FMU.

D. Description of Wildland Fire Management Strategies by Fire Management Unit

Common to All FMUs:

Fire Regime/Condition Class

Advanced succession and woody plant expansion have caused undesired ecological changes within the field office. These changes include increased stand density in mesquite and tamarisk, loss of perennial grasslands, and expansion of cholla cactus. These type conversions often correspond to losses of native biodiversity, decreased sustainability, and altered fire regimes.

The dominant vegetation types occurring in the field office includes native grassland prairies and riparian forests. Each vegetation type evolved with a distinct fire frequency, severity, and suite of effects which provided for long-term sustainability. Within these vegetation types, management activities such as fire suppression, livestock grazing, and the spread of invasive species have changed these fire regimes. Fuel treatment applications outlined in this FMP intend to move landscapes and fire regimes closer to their historic conditions.

For a given vegetation type, the fire regime condition class (FRCC) concept describes the degree of departure in: (1) vegetation structure, and (2) fire frequency/severity. This measure describes both the health of the fire regime, and also the appropriateness of the

vegetation community for the site. Condition Class 1 corresponds to landscapes where these variables are intact, while Condition Class 3 landscapes have highly altered ecological integrity. Condition Class 2 includes lands having moderate departure in fire regime health and structural integrity. At this point in time the field office does not have an exact break down on condition class by FMU but is currently working with the State fire ecologist and hopes to have a break down by FMU by condition class by in the near future.

Values at Risk in All Fire Management Units:

Threatened and endangered species are a concern within the Crossbar. The Canadian River and its associated riparian areas that form the northern boundary of the AmFO lands are habitat for the Arkansas River Shiner (ARS). The ARS has been classified as an endangered species. Any fire lanes constructed near the river would have to be to standards established through consultation with the USFWS.

Archaeological concerns are presently being managed on a case by case basis. Approximately 20% of the property has been inventoried for cultural sites. At the present time, there are 12 sites that are eligible for nomination to the National Register of Historic Places. Intensive inventories will likely reveal more.

Natural gas pipelines run through the property. All but one are owned and operated by the Bureau of Land Management. A 24 inch high pressure line owned by KinderMorgan also runs for approximately five miles in a northeasterly direction across the property. Leaks on the BLM lines are a matter of routine inspection. However, it is not known how often the KinderMorgan pipeline is tested. In the case of a prescribed fire, the company would be contacted well in advance to check the pipeline for leaks.

Visual resource concerns are prevalent within and near the three major canyons (Horse Creek, Ranch Creek and West Amarillo Creek) that divide the property into three sections. While fires would have no long term effect on the VRM, the blading of fire lanes into certain visually sensitive areas could cause long term visual damage.

Fire Management Unit (FMU) Descriptions:

Fire Management Unit Name: Flatlands

Category/Number: D1

1. Location

This FMU consists of most of the lands comprised by Cross Bar, which is located about 12 miles north of the city of Amarillo. The other three FMUs consist of relatively small areas in drainage and riparian corridors.

2. Characteristics

This FMU consists of undulating topography dominated by mesquite, yucca, blue gramma, buffalo grass, side oats gramma, big blue stem and little blue stem. The FMU consists of native range, generally dominated by native plants. There are no

known sensitive plant species. The entire FMU is important spring/summer/fall deer habitat. The area has not been grazed since 1993. The FMU contains old stands of grass beginning to be described as “rank”.

Air and water quality in the FMU meet national standards.

3. Wildland Fire History

The area has had several fires over the past seventy years. However, no wildfires have been recorded since BLM acquired the lands in 1998. 90% of this FMU has been burned utilizing prescribed fire and is now on a 3 to 5 year prescribed fire rotation.

Fire Season can start as early as January and last until significant precipitation occurs and the prairie grasses green up in late March early April. Fall and winter precipitation, from September through February significantly contribute to the severity of the spring/summer fire season. If significant precipitation is not received an extended fire season may occur and last until mid July.

The FMU supports one major fuel complex, prairie grass with shrubs (mesquite). Fire intensity in the grass and mesquite is dependent on spring rains and the amount of herbaceous growth from year to year. Fire behavior is dependent on wind speeds and can range from moderate to extreme with wind speeds over 8 mph and high temperatures and low relative humidity's with rates of spread of 80 chains per hour plus with crowning and torching in the mesquite beyond direct attack capability.

4. Fire Regime/Condition Class

The FMU is considered to be Fire Regime Condition Class (FRCC) 3, since fire has been excluded and the land has been overgrazed for 70 years.

5. Values at Risk / Resource Protection Constraints

In holdings of private property and natural gas facilities and infrastructure within and adjacent to the FMU are key resources to protect. Highway 287 could be impacted by smoke creating visibility hazards to motorists.

The priority is to prevent wildland fires from spreading to private land and to minimize smoke impacts to Hwy 287.

No heavy equipment/motorized vehicles will be allowed within 1/4 mile of perennial streams. Heavy equipment use on existing roads and fire lanes is preferred; otherwise, dozer use requires management approval. Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Office Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use. **Unlimited motorized access will not be permitted.**

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These

decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

6. Communities at Risk

There are no communities in the vicinity of the BLM lands. However, priority will be given to the protection of natural gas facilities and several pipe line and power line rights of way that cross the lands. Priority will also be given to preventing smoke from impacting Highway 287 and the Amarillo metropolitan area as well as Dumas located fifteen miles to the north of the Cross Bar.

7. Fire Management Objectives

Goal: Reduce wildland fire hazards around identified cultural sites, natural gas facilities and natural gas and power line infrastructure.

Objectives

Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources, natural gas facilities and natural gas and power line infrastructure to reduce damage from wildland fire.

Goal: Utilize planned and unplanned fires to restore and maintain primary natural resources and their processes where applicable in order to move FRCC 3 and 2 to FRCC 1.

Objectives

- Reduce crown fire/high severity wildland fire potential in identified areas where fuels accumulations exceed the historical range of variability.
- Restore fire as a key natural process that encourages native grassland ecosystems.
- Reduce established noxious and non-native plant cover.
- Employ, under agency guidelines, an appropriate management response strategy that considers the management of naturally-ignited wildland fire for resource benefit in areas of the Unit where current fire environment conditions warrant.
- Where necessary to meet fuels reduction objectives, utilize approved fuels management techniques which include prescribed fire treatments, to reduce localized fuels concentrations back to a more natural range of variability.
- Ultimately manage the FMU to allow for maximized wildland fire presence to the fullest extent possible, while protecting values at risk (i.e., private land).
- An appropriate suppression response will be utilized for all wildland fires that do not meet resource objectives or prescriptive criteria.

8. Fire Management Strategies

Suppression - The priority is to prevent wildland fires from spreading to private lands, cultural resources or improvements on BLM lands. Manage all fires in accordance with management objectives based on current conditions and fire location.

An annual briefing for fire personnel will be conducted ~~Annually fire personnel will be briefed~~ on conservation measures for fire suppression activities for the Arkansas River Shiner found in the Biological Assessment and Evaluation for the Fire and Fuels Management Plan, RMP Amendment 2000.

All wildfires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 1500 acres 90 percent of the time. All wildfires occurring at (FIL) 4-6 will be suppressed at less than 2500 acres 75 percent of the time.

Management strategies and action points will be based on fire activity and location. Normally, specific actions or combinations of actions will be determined on site by the incident commander.

Wildland Fire for Resource Benefit - Implement Appropriate Management Response with constraints developed by the ~~Field Office Resource Area~~ Staff. Fire Management will assess fuels, weather, ability to hold and contain, socio-political and those local factors that may constrain or promote the use of fire as a tool for the specific event.

Prescribed Fire: Prescribed fire will be conducted on 90% of the FMU. The goal is to re-establish the historic fire return interval of 5 years on the average and treat 2,130 acres annually in the FMU. Prescribed fire will be used in conjunction with chemical and mechanical treatments and seeding, to move FRCC 2 and 3 lands to FRCC 1. Fire will also be used to maintain FRCC 1 lands as well and to treat slash created by mechanical treatments.

Non-Fire Treatments: Mechanical treatments will be used to reduce stand density and crown closure to move FRCC 3 and 2 grasslands into FRCC 1. Mechanical fuels reduction will be used as a prelude to prescribed fires in areas where heavy accumulations of fuels exist, and to prepare fire lines along roads and fire lanes. Chemical treatment of shrubs may be used prior to reintroduction of fires in areas where shrubs preclude sufficient fine fuel growth to carry a prescribed fire.

Post Fire Rehabilitation and/or actions needed for Restoration – an inter-disciplinary team will develop plans for post fire rehabilitation. Post fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with Cross Bar values using the minimum tool concept. The following rehabilitation concerns should be addressed:

- Slopes of 15% or greater where surface erosion is likely
- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion.

Fire Management Unit (FMU) Description

Fire Management Unit Name: West Amarillo Creek

Category/Number: C/2

1. Location

This FMU consists of the lands along the large drainage and riparian corridor of West Amarillo Creek, near the eastern border of the Cross Bar. West Amarillo Creek is a tributary of the Canadian River.

2. Characteristics

This FMU consists of diverse riparian habitats generally in good to excellent condition. Water is present in West Amarillo Creek on a constant basis; there are also fish populations in some segments. Tamarisk that had replaced the cottonwood and willow biome has now been almost eliminated. There are no known sensitive plant species. The area serves as habitat for white tail deer as well as a mule deer, wild turkey, two types of quail and a large variety of other wildlife.

3. Wildland Fire History

The area has had several fires over the past seventy years. However, no wildfires have been recorded since BLM acquired the lands in 1998. Prescribed fire has been utilized to burn 100% of the grasslands outside of the riparian area.

Fire Season can start as early as January and last until significant precipitation occurs and the prairie grasses green up in late March early April. Fall and winter precipitation, from September through February significantly contribute to the severity of the spring/summer fire season. If significant precipitation is not received an extended fire season may occur and last until mid July.

The FMU supports two major fuel complexes, grass with shrubs and isolated stands of tamarisk. Fire intensity in the prairie grasses is dependent on spring rains and the amount of herbaceous growth from year to year. Fire behavior is dependent on wind speeds and can range from moderate to extreme with wind speeds over 8 mph and high temperatures and low relative humidity's with rates of spread of 80 chains per hour plus with crowning and torching beyond direct attack capability.

4. Fire Regime/Condition Class

This land is considered to be a FRCC 2, due to exclusion of fire and invasion of the exotic tamarisk, which has created a more volatile fuel type in the riparian areas. Most of the tamarisk has been killed, but the dry woody stems still are in place.

5. Values at Risk/Resource Protection Constraints

The priority is to prevent wildland fires from damaging riparian vegetation (cottonwood and willow) and to minimize smoke impacts to Hwy 287. Fire will damage efforts to re-

establish cottonwood and willow along banks as well as extremely valuable riparian habitat.

No heavy equipment/motorized vehicles will be allowed within 1/4 mile of perennial streams. Heavy equipment use on existing roads and fire lanes is preferred; otherwise, dozer use requires management approval. Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Office Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use. **Unlimited motorized access will not be permitted.**

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

6. Communities at Risk

There are no communities in the vicinity of the BLM lands. However, priority will be given to the protection of natural gas facilities and several pipe line and power line rights of way that cross the lands. Priority will also be given to preventing smoke from impacting Highway 287 and the Amarillo metropolitan area as well as Dumas located fifteen miles to the north of the Cross Bar.

7. Fire Management Objectives:

Goal: Reduce wildland fire hazards around riparian vegetation, identified cultural sites, natural gas facilities and natural gas and power line infrastructure.

Objectives

Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources, natural gas facilities and natural gas and power line infrastructure to reduce damage from wildland fire.

Goal: Utilize planned fires to restore and maintain primary natural resources and their processes where applicable in order to move FRCC 3 and 2 to FRCC 1.

Objectives

1. Grasslands

- Restore fire as a key natural process that encourages native grassland ecosystems.
- Maintain existing native grasses

2. Tamarisk

- Eliminate or drastically reduce tamarisk; re-establish cottonwood and willow community in riparian areas.

3. All types

- Reduce established noxious and non-native plant cover.
- Ultimately manage the FMU to allow for maximized wildland fire presence to the fullest extent possible, while protecting values at risk (i.e., riparian vegetation).

8. Fire Management Strategies

Suppression - The priority is to prevent wildland fires from damaging riparian vegetation (cottonwood and willow) and to minimize smoke impacts to Hwy 287. Manage all fires in accordance with management objectives based on current conditions and fire location.

An annual briefing for fire personnel will be conducted ~~Annually fire personnel will be briefed~~ on conservation measures for fire suppression activities for the Arkansas River Shiner found in the Biological Assessment and Evaluation for the Fire and Fuels Management Plan, RMP Amendment 2000.

All wildfires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 10 acres 90 percent of the time. All wildfires occurring at (FIL) 4-6 will be suppressed at less than 50 acres 75 percent of the time.

Management strategies and action points will be based on fire activity and location. Normally, specific actions or combinations of actions will be determined on site by the incident commander.

Wildland Fire for Resource Benefit - Wildland Fire Use for Resource benefit is not planned for this FMU but may be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition and an approved environmental analysis that includes fire use is completed.

Prescribed Fire - Prescribed fire is desired as a method to eradicate tamarisk. Prescribed fire will be used to treat One hundred percent of the grasslands outside the riparian vegetation annually within the FMU. Prescribed fire will be used to move FRCC 2 and 3 lands to FRCC 1. Fire will also be used to maintain FRCC 1 lands as well and to treat slash created by mechanical treatments.

Non-Fire Treatments - Mechanical and chemical treatments are desired as a method to eradicate tamarisk. Mechanical and chemical treatments will be used to reduce stand density and crown closure in the tamarisk to move FRCC 3 and 2 grasslands into FRCC 1. In some areas, multiple treatments will be required. In some instances, a combination of mechanical and prescribed fire will be used. Mechanical treatments can be applied to one hundred percent of the tamarisk over a ten year period.

Post Fire Rehabilitation and/or actions needed for Restoration – an inter-disciplinary team will develop plans for post fire rehabilitation. Post fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with Cross Bar values using the minimum tool concept. The following rehabilitation concerns should be address:

- re-planting of cottonwoods and stream bank erosion control.
- slopes greater than 30% will be evaluated for rehabilitation needs, which may include re-seeding and erosion control to prevent stream sedimentation.
- Temporary fences in areas where grazing pressure may inhibit re-establishment of

native plants following wildfire.

- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion.

Fire Management Unit (FMU) Description

Fire Management Unit Name: Horse Creek

Category/Number: C/3

1. Location

This FMU consists of the lands along the drainage and riparian corridor of Horse Creek, near the western border of the Cross Bar. Horse Creek is a tributary of the Canadian River.

2. Characteristics

This FMU is characterized by canyon bottom topography with native grasses. There has been no livestock grazing since 1993. Erosion gullies have rehabilitated themselves through time and rest. No roads exist into the canyon bottom. Canyon walls serve as the home to numerous raptor nests.

3. Wildland Fire History

The area has had several fires over the past seventy years. However, no wildfires have been recorded since BLM acquired the lands in 1998. Prescribed fire is planned for this FMU but has not been implemented.

Fire Season can start as early as January and last until significant precipitation occurs and the prairie grasses green up in late March early April. Fall and winter precipitation, from September through February significantly contribute to the severity of the spring/summer fire season. If significant precipitation is not received an extended fire season may occur and last until mid July.

The FMU supports two major fuel complexes, grass with shrubs and isolated stands of tamarisk. Fire intensity in the prairie grasses is dependent on spring rains and the amount of herbaceous growth from year to year. Fire behavior is dependent on wind speeds and can range from moderate to extreme with wind speeds over 8 mph and high temperatures and low relative humidity with rates of spread of 80 chains per hour plus with crowning and torching beyond direct attack capability.

4. Fire Regime/Condition Class

This land is considered a FRCC 2, due to exclusion of fire and invasion of the exotic tamarisk, which has created a more volatile fuel type in the riparian areas.

5. Values at Risk

The priority is to prevent wildland fires from damaging riparian vegetation (cottonwood and willow), minimize soil loss and to minimize smoke impacts to Hwy 287. Fire will

damage the efforts to re-establish cottonwood and willow along banks and may create erosion problems.

No heavy equipment/motorized vehicles will be allowed within 1/4 mile of perennial streams. Heavy equipment use on existing roads and fire lanes is preferred; otherwise, dozer use requires management approval. Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Office Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use. **Unlimited motorized access will not be permitted.**

All suppression tactics and support actions will be selected commensurate with potential fire behavior and minimizing impacts to values to be protected. These decisions will be based on interdisciplinary inputs to the extent possible, with respect to conditions on the ground.

6. Communities at Risk

There are no communities in the vicinity of the BLM lands. However, priority will be given to the protection of natural gas facilities and several pipe line and power line rights of way that cross the lands. Priority will also be given to preventing smoke from impacting Highway 287 and the Amarillo metropolitan area as well as Dumas located fifteen miles to the north of the Cross Bar.

7. Fire Management Objectives:

Goal: Reduce wildland fire hazards around riparian vegetation, identified cultural sites, natural gas facilities and natural gas and power line infrastructure.

Objectives

Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources, natural gas facilities and natural gas and power line infrastructure to reduce damage from wildland fire.

Goal: Utilize planned fires to restore and maintain primary natural resources and their processes where applicable in order to move FRCC 3 and 2 to FRCC 1.

Objectives

1. Grasslands

- Restore fire as a key natural process that encourages native grassland ecosystems.
- Maintain existing native grasses

2. Tamarisk/Mesquite

- Eliminate or drastically reduce tamarisk and mesquite; re-establish cottonwood and willow community in riparian areas.

3. All types

- Reduce established noxious and non-native plant cover.
- Ultimately manage the FMU to allow for maximized wildland fire presence to the

fullest extent possible, while protecting values at risk (i.e., riparian vegetation).

8. Fire Management Strategies

Suppression - The priority is to prevent wildland fires from damaging riparian vegetation (cottonwood and willow), minimize soil loss and to minimize smoke impacts to Hwy 287. Manage all fires in accordance with management objectives based on current conditions and fire location.

~~An annual briefing for fire personnel will be conducted~~ ~~Annually fire personnel will be briefed~~ on conservation measures for fire suppression activities for the Arkansas River Shiner found in the Biological Assessment and Evaluation for the Fire and Fuels Management Plan, RMP Amendment 2000.

All wildfires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 10 acres 90 percent of the time. All wildfires occurring at (FIL) 4-6 will be suppressed at less than 50 acres 75 percent of the time.

Management strategies and action points will be based on fire activity and location. Normally, specific actions or combinations of actions will be determined on site by the incident commander.

Wildland Fire for Resource Benefit: Fire is desired in this area. However, due to the proximity of private lands, resource benefit fires would not be a viable alternative. Therefore, there are no plans for resource benefit fires in this FMU.

Prescribed Fire: Prescribed fire, in conjunction with seeding, will be used to move FRCC 2 and 3 lands to FRCC 1. Fire will also be used to maintain FRCC 1 lands as well and to treat slash created by mechanical treatments. Prescribed fire will be used to re-create the average five year fire return interval in grasslands in the FMU.

Non-fire treatments - Mechanical treatments and chemical – will be used to control invasive plant species and to reduce stand density and crown closure in the tamarisk to move FRCC 3 and 2 grasslands into FRCC 1. In some areas, multiple treatments will be required. In some instances, a combination of mechanical and prescribed fire will be used.

Post Fire Rehabilitation and/or actions needed for Restoration – an inter-disciplinary team will develop plans for post fire rehabilitation. Post fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with the Cross Bar values using the minimum tool concept. The following rehabilitation concerns should be address:

- re-planting of cottonwoods and stream bank erosion control.
- slopes greater than 30% will be evaluated for rehabilitation needs, which may include re-seeding and erosion control to prevent stream sedimentation.
- Temporary fences in areas where grazing pressure may inhibit re-establishment of

native plants following wildfire.

- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion.

Fire Management Unit (FMU) Description

Fire Management Unit Name: Ranch Creek

Category/Number: C/4

1. Location

This FMU consists of the lands along the drainage and riparian corridor of Ranch Creek, near the north-central portion of the Cross Bar. Ranch Creek is a tributary of the Canadian River.

2. Characteristics

This FMU is characterized by canyon bottom topography with native grasses. There has been no livestock grazing since 1993. Erosion gullies have rehabilitated themselves through time and rest. No roads exist into the canyon bottom. At the head of Ranch Creek is a spring fed “plunge pool”. This pool of water is surrounded by cottonwood, willow, grape vines, etc. The pool is the primary source of water for wildlife in the area.

3. Wildland Fire History

The area has had several fires over the past seventy years. However, no fires have been reported since BLM acquired this land in 1998. Prescribed fire is planned for this FMU but has not been implemented.

Fire Season can start as early as January and last until significant precipitation occurs and the prairie grasses green up in late March early April. Fall and winter precipitation, from September through February significantly contribute to the severity of the spring/summer fire season. If significant precipitation is not received an extended fire season may occur and last until mid July.

The FMU supports two major fuel complexes, grass with shrubs and isolated stands of mesquite. Fire intensity in the prairie grasses is dependent on spring rains and the amount of herbaceous growth from year to year. Fire behavior is dependent on wind speeds and can range from moderate to extreme with wind speeds over 8 mph and high temperatures and low relative humidity with rates of spread of 80 chains per hour plus with crowning and torching beyond direct attack capability.

4. Fire regime/condition class

This land is considered a FRCC 2, due to exclusion of fire and invasion of the exotic tamarisk, which has created a more volatile fuel type in the riparian areas.

5. Values at Risk

The priority for Appropriate Management Response (AMR) is to prevent wildland fires from damaging riparian vegetation (cottonwood and willow) and to minimize smoke impacts to Hwy 287. Fire will damage efforts to re-establish cottonwood and willow along banks as well as extremely valuable riparian habitat.

No heavy equipment/motorized vehicles will be allowed within 1/4 mile of perennial streams. Heavy equipment use on existing roads and fire lanes is preferred; otherwise, dozer use requires management approval. Under extreme fire danger conditions (generally PL-4 and 5), advance approval may be granted by the Field Office Manager to allow motorized access for suppression purposes. Limitations will be set on type, number, and extent of use. **Unlimited motorized access will not be permitted.**

6. Communities at Risk

There are no communities in the vicinity of the BLM lands. However, priority will be given to the protection of natural gas facilities and several pipe line and power line rights of way that cross the lands. Priority will also be given to preventing smoke from impacting Highway 287 and the Amarillo metropolitan area as well as Dumas located fifteen miles to the north of the Cross Bar.

7. Fire Management Objectives

Goal: Reduce wildland fire hazards around riparian vegetation, identified cultural sites, the plunge pool, natural gas facilities and natural gas and power line infrastructure.

Objectives

Apply mechanical fuel reduction and prescribed fire where applicable around vulnerable prehistoric and historic resources, natural gas facilities and natural gas and power line infrastructure to reduce damage from wildland fire.

Goal: Utilize planned fires to restore and maintain primary natural resources and their processes where applicable in order to move FRCC 3 and 2 to FRCC 1.

Objectives

1. Grasslands

- Restore fire as a key natural process that encourages native grassland ecosystems.
- Maintain existing native grasses

2. Mesquite

- Eliminate or reduce mesquite; re-establish cottonwood and willow communities.

3. All types

- Reduce established noxious and non-native plant cover.
- Ultimately manage the FMU to allow for maximized wildland fire presence to the fullest extent possible, while protecting values at risk (i.e., riparian vegetation).

8. Fire Management Strategies

Suppression - The priority is to prevent wildland fires from damaging riparian vegetation (cottonwood and willow) and to minimize smoke impacts to Hwy 287. Manage all fires in accordance with management objectives based on current conditions and fire location.

~~An annual briefing for fire personnel will be conducted~~ ~~Annually fire personnel will be briefed~~ on conservation measures for fire suppression activities for the Arkansas River Shiner found in the Biological Assessment and Evaluation for the Fire and Fuels Management Plan, RMP Amendment 2000.

All wildfires occurring at a Fire Intensity Level (FIL) 1-3 will be suppressed at less than 10 acres 90 percent of the time. All wildfires occurring at (FIL) 4-6 will be suppressed at less than 50 acres 75 percent of the time.

Management strategies and action points will be based on fire activity and location. Normally, specific actions or combinations of actions will be determined on site by the incident commander.

Wildland Fire for Resource Benefit - Wildland Fire for Resource benefits is not planned for this FMU but may be considered after more fuels management activities can be implemented to reduce the severity of an unplanned ignition and an approved environmental analysis that includes fire use is completed.

Prescribed Fire - Prescribed fire, in conjunction with seeding, will be used for resource enhancement and for hazardous fuels reduction to break up fuel continuity. Prescribed fire will be used to re-create the average five year fire return interval in grasslands in the FMU.

Non-Fire Fuels Treatments Mechanical and chemical treatments will be utilized to control invasive plant species, particularly tamarisk.

Post Fire Rehabilitation and/or actions needed for Restoration – an inter-disciplinary team will develop plans for post fire rehabilitation. Post fire rehabilitation and restoration will be used to facilitate reestablishment of the potential natural community of the site. All rehabilitation actions will be commensurate with wilderness values using the minimum tool concept. The following rehabilitation concerns should be address:

- re-planting of cottonwoods and stream bank erosion control.
- slopes greater than 30% will be evaluated for rehabilitation needs, which may include re-seeding and erosion control to prevent stream sedimentation.
- Temporary fences in areas where grazing pressure may inhibit re-establishment of native plants following wildfire.
- Road obliteration or restoration where the road created by the suppression activity does not meet resource objectives for the area or may cause erosion.

IV. Fire Management Program Components

A. Wildland Fire Suppression

1. Fire Planning Unit Fire History

These lands were acquired by the BLM only recently, and recorded fire history is virtually non-existent. No wildfires have been reported by BLM since 1997. From the statements of local individuals, it is apparent that numerous fires have occurred on the land over the past several years. Prior to settlement and intensive grazing, the plains of the Texas panhandle were known as extensive grassland prairies, where large and frequent wildfires were a dominant change mechanism in the ecosystem.

2. Suppression/Preparedness Actions

BLM does not maintain a fire suppression force at Amarillo. BLM will rely on the Lake Meredith National Recreation Area Fire Management program to coordinate suppression and preparedness activities under the Memorandum of Understanding entered into by the Amarillo Field Office and the Lake Meredith National Recreation Area (MOU LLNM-006000-2009-001 Appendix B).

3. Fire Prevention, Community Education, Community Risk Assessment, and other Community Assistance Activities

Due to the small size of the AmFO fire program, and the remoteness of its lands from communities, there is not an established community assistance program.

The BLM lands are not yet accessible to the general public, so that minimal visitation occurs. When access to the lands is obtained, an active fire prevention program will be established. In the future, prevention efforts will be coordinated with the Albuquerque District FMO and the National Park Service to jointly increase our ability to prevent unwanted ignitions. The Amarillo metropolitan area contains a large percentage of the population of the Texas panhandle, and therefore presents a significant opportunity to provide prevention information and fire education to a large segment of the public.

4. Fire Training Activities

The Field Office Manager in coordination with the Albuquerque District FMO will ensure that all employees receive proper training and certification for fire positions that they work in. This will include positions in operations, administrative and/or other skills in support of the fire program. The Field Office Manager will ensure that all qualified employees are made available for local and national assignments as the situation demands.

Approximately ten AmFO employees are trained and qualified to perform non-fireline duties. Red Card qualifications within the field office staff relate primarily to dispatch. New Mexico BLM State Office funding is made available to train employees interested in pursuing red card qualifications, and to maintain qualifications of those already trained.

5. Detection

Detection of wildfires is usually accomplished by BLM employees. The helium operations require staff to be on-site at the Helium Enrichment Unit (located approximately 3 miles from the Cross Bar) 24 hours a day, so there is virtually always an employee on duty. The small size

of the Field Office lands and the fact that the terrain is relatively flat allow for the rapid detection of any smoke by either BLM employees or members of the public. Therefore, an active fire detection program is not warranted.

6. Fire Weather and Fire Danger

Lake Meredith National Recreation Area is approximately five miles east of the BLM lands and is in an identical fuel type and terrain. Weather observations made by the National Park Service (NPS), and their fire danger indices are equally applicable to the BLM lands for either fire danger rating or for fire behavior forecasting. Therefore, there is no need to duplicate their efforts with additional weather stations or NFDRS computations on the part of BLM.

7. Aviation

There is very little need for aviation resources during fire suppression operations on AmFO lands. Due to the flat terrain and accessibility by engines and ground forces, virtually all fire suppression operations will be done on the ground. There are no cooperated aircraft for fire suppression within 200 miles of Amarillo.

8. Initial Attack

Initial attack will be provided by the NPS under the MOU (MOU LLNM-006000-2009-001 Appendix B).

9. Extended Attack and Large Fire Suppression

The fire management staff from Lake Meredith National Recreation Area will also provide oversight and logistical support for extended attack and large fire suppression operations under the MOU (MOU LLNM-006000-2009-001 Appendix B).

AmFO is under the dispatch organization of the Albuquerque Interagency Dispatch Center. All fire suppression resources not available locally will be obtained through the Albuquerque Interagency Dispatch Center.

B. Wildland Fire for Resource Benefit

Wildland fire is generally desirable for the vegetative communities and ecosystems in the AmFO, and it was extensively analyzed as a potential alternative for each FMU. However, due to the extremely small size of the AmFO, and its proximity to private lands, the decision has been made to not utilize wildland fire for resource benefit until more fuels management activities can be implemented to reduce the severity of an unplanned ignition and an approved environmental analysis that includes fire use is completed.

An additional factor in this decision is the fact that plans call for an extremely aggressive program of prescribed fire. The goal is to burn the majority of the BLM lands in AmFO on a frequent rotation of approximately once every five years. This aggressive prescribed fire program will minimize fuels accumulations, and therefore minimize the potential for any

unplanned ignition to grow to more than a few acres in size. Therefore, opportunities to successfully implement resource benefit fires would be extremely limited.

C. Prescribed Fire

1. Planning and Documentation

An aggressive prescribed fire program is planned for AmFO. The goal of this program is to reduce shrubs and succulent vegetation and to return the land to grasslands more representative of the pre-settlement conditions of the southern Great Plains. Under pre-settlement conditions, wildland fire was a significant mechanism in maintaining the ecosystem and had a frequent return interval, as frequent as every two to five years. Under this scenario, AmFO will conduct prescribed fires on between 2,000 and 5,000 acres annually.

The long-term goal is to move the entire AmFO land area from the existing Fire Regime Condition Class (FRCC) 2 and 3 to FRCC 1, over the course of 20 years.

Prescribed fires will be planned and conducted under the general oversight of the AmFO Resource Management Specialist. Prescribed burn plans will be developed by a qualified burn boss. Prescribed burns will be conducted with equipment and qualified personnel from the Albuquerque District and other BLM offices.

2. Air Quality and Smoke Management

Air Quality in the field office is good. There are no Class I airsheds or non-attainment areas within the field office. Registration and approval for burning are obtained from the Texas Commission for Environmental Quality.

Smoke management is a concern. Prevailing winds on the Crossbar are from the southwest. Highway US 287/87 is just a few miles to the east and northeast of the property. Extreme smoke conditions could shut down traffic on this heavily traveled highway. In addition, there is an electric transmission corridor running through the center of the property. Presently there are two major transmission lines (230kV and 345kV) within the corridor. Heavy smoke conditions could cause the lines to arc and possibly shut down electrical services for a large area of Amarillo. The City of Dumas is located approximately 15 miles northeast of the property. Past fires have caused some smoke problems for that city.

D. Non-Fire Fuel Treatments

While prescribed fire will be the major treatment method for AmFO lands, there will be a continuing need for mechanical fuels treatments and chemical treatments. Mechanical treatments will be used to reduce invasive species, particularly tamarisk. It is anticipated that approximately 20 acres a year will be treated by cutting tamarisk and treating the stumps with herbicide. Mechanical thinning may also occur in isolated areas of heavy fuels accumulation as a precursor to prescribed fire.

Chemical treatment of other areas of brush or tamarisk is also a feasible alternative, particularly in areas where there is currently little grass to carry prescribed fire.

There are currently no local contractors to conduct non-fire fuels treatments, so the work would be done either in-house, or by contractors from outside the local area.

There is no local market for biomass or other by-products from mechanical thinning operations, so biomass utilization is not a viable alternative.

E. Emergency Stabilization and Rehabilitation

Fire is generally considered to be beneficial for the lands in AmFO. However, there are some cases in which emergency stabilization and rehabilitation will be considered. Examples include:

--Fire is potentially damaging to riparian plant communities such as cottonwood stands. Any wildfire impacting cottonwood areas should be analyzed for negative effects, and the feasibility of re-planting cottonwoods should be considered.

--Fire on slopes greater than 30%, especially in proximity to creeks, should be examined for potential erosion or sedimentation of waterways.

F. Community Protection/Community Assistance

There are no communities within or adjacent to the AmFO lands, and no identified communities at risk in Potter County. Therefore, BLM has limited opportunities to provide community protection or community assistance. However, priority will be given to the protection of natural gas facilities and several pipe line and power line rights of way that cross the lands. Priority will also be given to preventing smoke from impacting Highway 287 and the Amarillo metropolitan area as well as Dumas located fifteen miles to the north of the Cross Bar.

BLM does cooperate with the Potter County Fire Department. This is the only fire department in Texas that BLM interacts with, and therefore BLM could support Potter County through the Rural Fire Assistance (RFA) program to possibly provide monies for personal protective equipment and training.

V: Organization and Budget

A. Budget and Organization

Currently there is no fire budget and no fire organization for BLM Amarillo Field Office. Expertise for the full range of fire management activities is utilized from the Albuquerque District Office, and from the National Park Service located at Lake Meredith National Recreation Area (MOU LLNM-006000-2009-001 Appendix B). Expertise for prescribed burns and fuels activities is also obtained from the Albuquerque District Office.

Limited preparedness funding is provided by the State Office for training of red-card qualified employees.

A three year program of work in the National Fire Plan Operating System (NFPORS) is maintained by the Albuquerque District Office. The AmFO receives project funding for

prescribed fire and hazardous fuels reduction annually. However, the AmFO has no base funding in hazardous fuels management.

B. Assistance Agreements and Intra/Interagency Agreements

A Memorandum of Understanding (MOU LLNM-006000-2009-001 Appendix B) has been developed between the BLM and the NPS at Lake Meredith National Recreation Area. The MOU initiates a relationship between the parties to establish an effective and efficient cooperative fire suppression organization for BLM and NPS for Federal lands within the Amarillo Field Office and Lake Meredith National Recreation Area.

C. Equipment Rental Agreements

The field office uses emergency equipment rental agreements (EERA's) prepared by the Cibola National Forest. Copies are stored in the Albuquerque Interagency Dispatch Center, and the Administrative Services Office located in the Rio Puerco Field Office.

D. Contract Suppression and Prescribed Fire Resources

Due to limited Federal wildfire activity in the area, there are no contract vendors in the area who provide fire suppression services.

There is currently interest by West Texas A&M University in supplying fire qualified students for prescribed burn activities on the Cross Bar. This would be in conjunction with their on-going fire management studies.

VI. Monitoring and Evaluation

A systematic approach for monitoring prescribed fire and non-fire treatments has been developed for the AmFO. Project-level monitoring will occur on all prescribed fire projects. Each prescribed burn plan will outline monitoring requirements and responsibilities for that project. Specific fire monitoring protocols have not been adopted for the Field Office. Currently, photo plots are the preferred method of monitoring the short and long term change after treatment. At some time in the future, it may be necessary to develop monitoring protocols, such as vegetation studies using random transects to analyze the success of vegetation and fuel treatments. West Texas A&M University has established numerous large study plots to determine the effects of different types of burning regimes on plants, small mammals, invertebrates, soils, etc.

Project monitoring will require that the Burn Boss conduct First Order Fire Effects Monitoring. This protocol consists of the development of prescriptive parameters (i.e., weather, fuel loading, fuel moistures, etc.) to meet desired objectives, then to evaluate the success or failure of the parameters in meeting the objectives of the treatment. The Burn Boss will insure that either he/she or a subordinate will document such items as: burn patterns, consumption, plant mortality, scorch height, air quality and other requirements related to fire treatment objectives. The Burn Boss will compile all data and file them in the appropriate project file.

Program evaluation will continue to be a high priority. Periodic fire and fuels program reviews will be conducted to evaluate the fire, fuels and the prescribed fire program to insure that the overall program is meeting bureau standards. This will consist of formal Readiness Reviews

and/or informal evaluations/site visits of specific projects and programs. All reviews and evaluations will be documented and the results will be given to the Field Office Manager.

An informal critique will be held following each prescribed fire, to document successes or shortcomings. Similar critiques will be conducted for all wildfires that escape initial attack.

Glossary of Terms and Acronyms

Adjective Rating – A descriptive title used to communicate wildfire danger, as determined by NFDRS, to the public. Five classes exist: Low, Moderate, High, Very High and Extreme.

Aggressive Attack – Usually follows fire discovery immediately and with sufficient force to affect control at the earliest possible time with minimum acres burned.

Agency Administrator – Responsible line officer.

Agency Representative – Individual assigned to an incident from an assisting or cooperating agency, which has been delegated full authority to make decisions on all matters affecting that agency's participation in the incident.

Air Quality - The general term alluding to how clean or dirty the atmosphere is from undesirable substances (gases, liquids or solid particles).

Appropriate Management Response – Suppression response composed of confine, contain, control, or a combination that most efficiently meets fire management direction under current and expected burning condition with the minimum use of people and equipment.

Area of Critical Environmental Concern (ACEC) - An area where special management attention is needed to protect and prevent irreparable damage to important historical, cultural, scenic or other natural resource systems.

Backfire – A fire set along the inner edge of a fireline which burns against the wind and is used to consume the fuel in the path of a wildfire.

Burning Conditions – The state of the combined factors of the environment that affect fire behavior in a specified fuel type.

Community Assistance - A collaborative process among multiple levels of government, which is characterized by a common strategy, with the goal of community protection and diminished risk and consequences of severe wildland fires.

Communities at Risk - Areas of human development that have been identified by a collaborative process as having the potential of extensive damage from wildland urban interface type fires.

Containment – The completion of a control line around a fire and any associated spot fires which can reasonably be expected to check the fire's spread.

Desired Plant Community - The plant community which provides the vegetation attributes required for meeting or exceeding RMP vegetation objectives.

Dozer line - The removal of vegetative material by using the blade of a bulldozer to push it aside, creating a fireline to mineral soil.

Energy Release Component – The NFDRS index defined as the total heat release per unit area within the fire front at the head of the moving fire.

Escaped Fire – A wildfire that cannot be successfully controlled by initial attack forces or a prescribed fire that escapes prescription and burns as a wildfire.

Fire Adapted Species – Species that remain on site within a burned area and adjust their feeding habits and habitat requirements to post burn conditions. No significant increases or decreases in the population are attributed directly to the fire.

Fire Behavior – The response of fire to its environment of fuel, weather, and terrain including its ignition, spread, and the development of other phenomena such as turbulent and convective winds and mass gas combustion.

Fire Danger Rating – Fire management system that integrates fire danger factors into qualitative or numerical indices which indicate the need for current levels of fire protection preparedness or activity.

Fire Dependent or Fire Maintained Ecosystems – An ecosystem can be called fire dependent or fire maintained if periodic perturbations by fire are essential to the functioning of the system.

Fire Dependent Species – Species that rely on fire as a proliferating event. In the absence of fire, marked declines in the population are detected over time.

Fire Intolerant Species – Species that leave a burned over area and its proximity immediately following fire and do not return until many years post burn or until preburn conditions are again duplicated. No reproduction of species within burned area is documented.

Fire Impervious Species – Species that remain unaffected by fire due to habitat preference (areas that will not burn) or morphological/physiographic defenses (barriers) to the fire.

Fire Lane – A dozer line constructed, generally using a road grader, and maintained on a routine basis to prevent the spread of wildfire.

Fire Management Objectives – The planned, measurable result to be obtained from fire protection and use.

Fire Management Unit (FMU) – A distinct parcel of land that can be recognized and mapped by its external features and in which suppression responses to fire have been predetermined.

Fire Monitoring – The systematic process of collecting and recording fire-related data, particularly with regard to fuels, topography, weather, fire behavior, fire effects, smoke, and fire location.

Fire Occurrence Map – A map that shows by suitable symbols the starting points of all fires of various causes for a given period.

Fire Prescription – A written statement defining the objectives to be attained, and the conditions of temperature, humidity, wind direction and speed, and fuel moisture, under which a fire will be allowed to burn.

Fire Season – The portion of the year during which fires are likely to occur, spread, and do sufficient damage to warrant organized fire control. Strongly dependent on climate.

Fire Prevention – Activities directed at reducing the number of fires that start, including public education, law enforcement, personal contact and reduction of fuel hazards.

Fuel Loading – Oven-dry weight of fuel per unit area, referenced by fuel size or time lag categories.

Fuel Model – Simulated fuel complex for which all fuel descriptions required for the solution of a mathematical rate of spread have been specified.

Fuel Type – An identifiable association of fuel elements including species, form, size arrangement or other characteristics that will cause a predictable rate of spread or resistance to control under specified weather conditions.

Handline - The removal of vegetative material using shovels, Mcleods and other tools in order to create a fireline to mineral soil.

Head Fire – Fire front spreading or ignited to spread with the gradient (with the wind).

Incident Command System – Combination of facilities, equipment, personnel, procedures and communications operating within a common organizational structure and responsibility for assigned resources to effectively accomplish stated objectives pertaining to an incident.

Incident Commander – The person responsible for the management of all activities on an incident; the person who exercises the command function.

Initial Attack - An aggressive response to a wildland fire based on values to be protected, benefits of response, and reasonable cost of response.

Management Ignited Prescribed Fire – Fire purposely set under a predetermined prescription (set of weather or fire behavior conditions) for purposes of achieving a specific response management objective.

Minimum Impact Suppression Strategy (MIST) - A suppression strategy which allows fire fighters to fight a wildland fire with tactics commensurate with the fires potential or existing behavior, yet leave minimal environmental impact

Memorandum of Understanding (MOU) - An agreement between two governmental agencies which allows them to provide services to one another with certain stipulations.

Mutual Aid - Any form of direct assistance from one fire agency to another during an emergency, based upon a pre-arrangement between agencies involved and generally made upon the request of the receiving agency.

National Fire Danger Rating System (NFDRS) -- A system which uses historical analysis of fire weather data to identify thresholds for staffing class, adjective rating and preparedness levels.

Prescribed Fire Units – stratification of a land parcel by the same fuel type, vegetation type or resource management objective for purposes of managing the application of prescribed fire on a rotational basis.

Prescription – written statement defining burning objectives to be attained through the application of prescribed fire including temperature, humidity, wind direction and wind speed, fuel moisture content, etc., generally expressed as acceptable ranges of the various indices.

Presuppression – Activities undertaken in advance of fire occurrence to help ensure more effective fire suppression, including planning, recruitment and training of fire personnel, procurement and maintenance of equipment and supplies, fuel treatments and maintenance of fuel break network.

Rate of Spread – Relative activity of a fire in extending its horizontal dimension, expressed as a rate of increase of fire perimeter, in total area or fire length of the active fire front, depending on the intended use of the information; generally expressed in chains per hour.

Red Card – A qualification card issued to fire rated persons showing their qualification to fill given positions and also their training needs.

Red Flag – Term used by fire weather forecasters to alert fire management personnel to special or adverse weather conditions that present a high probability of extreme fire behavior.

Riparian Area - Situated on or pertaining to the bank of a river, stream or other body of water. Normally refers to plants and other types of vegetation from along banks.

Smoke Sensitive Area – Area in which smoke from outside sources is intolerable, for reasons such as heavy population, existing air pollution, or intensive recreation or tourist use, location of medical facilities, retirement communities, etc.

Staffing Level – A readiness class of one to five determined by NFDRS and related to fire danger to trigger presuppression and readiness actions.

Suppression – All the work of extinguishing or confining a fire beginning with its discovery.

Values at Risk - The value of natural resources in relationship to how easily it can be restored or replaced should it be damaged or destroyed by human or natural causes.

Ventilation Factor – A numerical value relating the potential of the atmosphere to disperse airborne pollutants from a stationary source calculated by multiplying the mixing height by the transport wind speed.

Wetlands – Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support vegetation typically adapted for life in saturated soil conditions.

Wildland Fire for Resource Benefit - A natural ignition which will be managed as a wildfire under limited suppression strategy in order to provide a resource benefit to a fire dependent ecosystem.

Wildfire – A free burning fire not within prescription. All fires, other than prescribed fires, that occur on wildlands.

Wildland Fire Management – All activities related to the prevention, control or use of fire burning through vegetation under specific prescriptions for the purpose of achieving fire management objectives.

Wildland Urban Interface (WUI) - The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Work Capacity Test (WCT) - A physical fitness test that all fire fighters must pass before they are allowed an assignment on the fireline.

APPENDICIES

Appendix A

Field Office Fire Management Units

Appendix B

Memorandum of Understanding between Lake Meredith National Recreation Area (NPS) and the Amarillo Field Office (BLM)

Appendix C

Delegations of Authority

**Albuquerque District FMO
Lake Meredith National Recreation Area FMO**

Appendix D



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Amarillo Field Office - Helium Operations
801 South Fillmore, Suite 500
Amarillo, Texas 79101-3545

www.blm.gov/nm

In Reply Refer To:

9213-1

Todd Richards, Bureau of Land Management Fire Management Officer for the Amarillo Field Office, is delegated the authority to act on my behalf for the following duties and actions:

1. Represent the Amarillo Field Office on the Albuquerque Fire Zone board of directors.
2. Coordinate all prescribed fire activities and suspending all prescribed fire and issuance of burning permits when conditions warrant.
3. Oversee and coordinate the Albuquerque Zone Interagency Dispatch Center on behalf of the BLM.
4. Request and oversee distribution of Severity funding for Field Office Fire and Aviation.
5. Approve Fire Program requests for overtime, hazard pay, and other premium pay.
6. Ensure all incidents are managed in a safe and cost-effective manner.
7. Coordinate all fire funding accounts with the Administrative Officer to assure Field Office Fiscal guidelines are adhered to.
8. Coordinate and provide all fire and prevention information needs, and inform internal and external customers with necessary information.
9. Approve and sign aviation request forms.
10. Approve Red Cards in accordance with State Office guidance.
11. Authorized to hire Emergency Firefighters in accordance with the Department of the Interior Pay Plan for Emergency Workers.

Amarillo Field Office Manager

Date



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

Amarillo Field Office - Helium Operations
801 South Fillmore, Suite 500
Amarillo, Texas 79101-3545

www.blm.gov/nm

In Reply Refer To:

9213-1

_____, National Park Service Fire Management Officer for the Lake Meredith National Recreation Area, is delegated the authority to act on my behalf for the following duties and actions:

1. Manage and coordinate pre-suppression and suppression activities on BLM lands located in the Amarillo Field Office.
2. Cooperate with the Albuquerque District FMO to Coordinate, preposition, send and order fire and aviation resources in response to current and anticipated zone fire conditions.
3. Coordinate with the Albuquerque District FMO on the distribution of Severity funding for Field Office Fire and Aviation.
4. Ensure that only fully-qualified personnel are used in wildland fire operations.
5. Ensure all incidents are managed in a safe and cost-effective manner.
6. Provides Albuquerque District Fire Management Officer fire reports for wildfires on Amarillo BLM lands.
7. Represent Amarillo BLM on wildfire issues as it pertains to local Multi Agency Coordinating Group

Amarillo Field Office Manager

Date