

Bureau of Land Management

Amarillo Field Office

2004

Fire Management Plan

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I. Introduction

The Bureau of Land Management recently acquired 11,833.8 acres in Potter County, Texas, about twelve miles north of the city of Amarillo, Texas. The lands were originally purchased by the Bureau of Mines in 1931, as an underground storage facility for the nation's helium reserve. The BLM assumed management responsibility of this area, known locally as the Crossbar Ranch, in 1998, and now manages the helium program as well as the surface estate. These BLM lands constitute the Amarillo Field Office (AuFO) which is administratively located in the BLM New Mexico organization. See Appendix 1 for a map of the Field Office.

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.

A. Purpose

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

A Fire and Fuels Management Plan Amendment, including the Cross Bar Ranch managed by the AmFO, was approved in September 2004. This Plan Amendment brings the Amarillo Field Office Resource Management Plan into compliance with the Federal Wildland Fire Management Policy. This Plan Amendment establishes Fire Management Categories, and provides goals for fire and fuels treatments.

This FMP is a strategic plan that refines and it implements decisions made in the Fire and Fuels Management Plan Amendment, but does not make new decisions. As such, this FMP is not subject to further evaluation under NEPA. When on-the-ground projects, such as prescribed fires or hazard fuels reduction projects are implemented under this FMP, those projects will undergo further NEPA analysis.

C. Collaboration

Due to the small size of the BLM AuFO lands, coordination of fire management with adjoining jurisdictions is essential to provide a safe and cost effective fire program. Fire management activities are coordinated with the Potter County Fire Department and the National Park Service, Lake Meredith National Recreation Area.

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 Environment Department when planning prescribed burns. As part of the Plan Amendment, 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 (Plan Amendment, Appendix C) as well as effect determinations for threatened and endangered species found at the Cross Bar Ranch. As part of the Plan Amendment, the Texas State Historic Preservation Office was consulted but did not comment on programmatic fire and fuels treatments planned for the Cross Bar Ranch, 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 follows guidance established by the Fire and Fuels Management Plan Amendment for Public Land in New Mexico and Texas (September 2004). The Fire Management Plan has been tiered to decisions contained within the Plan Amendment, and implements those decisions.

The FMP derives overall program guidance from the following:

- 1998 BLM Handbook 9214, “Prescribed Fire Management” describes authorities and policies for prescribed fire use on public lands administered by the Bureau of Land Management.
- 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.
- August 2001, “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,
- May 2002, “Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment, 10 Year Comprehensive Strategy – Implementation Plan”
- August 2002, “Healthy Forests - An Initiative for Wildfire Prevention and Stronger Communities.”

III. Wildland Fire Management Strategies

A. General Management Considerations

The first priority in the AmFO fire program is to provide for firefighter and public safety. The protection of human life is the single, overriding suppression priority. Setting priorities among protecting communities, properties, improvements, and natural and cultural resources will be done based on the values to be protected, human health and safety, and the cost of protection. Once people have been committed to an incident, these human resources become the highest value to be protected. Every effort will be made to suppress fires at a minimum cost, but never at the expense of firefighter and public safety.

Because the Amarillo Field Office has an extremely small fire management workload, it would

not be cost effective for BLM to establish a fire suppression organization at AmFO. Wildfires on AmFO lands are suppressed by qualified personnel from the Potter County Fire Department. In Texas, county fire departments have statutory responsibility for suppressing all wildfires within their county, whether the lands are under private, state, or federal ownership.

The National Park Service has fire fighting crews at Lake Meredith National Recreation Area. They are located in Fritch, Texas, approximately an hour's drive from the BLM lands. At the present time the AmFO is working on establishing a cooperative agreement to utilize the skills and expertise of the NPS fire management staff for oversight of initial attack and to manage extended attack operations.

A majority of the BLM land (approximately 8100 acres) has not been grazed since 1993. The remainder has not been grazed by domestic livestock since 1999. The land was severely overgrazed for approximately 70 years and is currently in poor health due to noxious weed encroachment and decadent vegetation buildup. Prescribed fire, preferably in the early spring, greatly enhances the health and vigor of the vegetation, reduces decadent fuel loads, and reduces the encroachment of noxious weed, in particular, cholla cactus and mesquite.

For the BLM lands in Texas, fire is a natural phenomenon and has been an essential part of the ecosystem for thousands of years. Unfortunately, fire as a management tool has been eliminated for the past 100 years. Prior to that time, fire was a dominant factor in maintaining this grassland area. Largely due to the exclusion of fire in this area, the Crossbar has converted to shrubs with a variable density grass-forb understory. Fire is considered beneficial for all of the Crossbar and will be used, instead of livestock grazing, as the primary vegetative manipulation tool for the land to eliminate woody shrubs while reducing excess litter and controlling noxious or undesirable plant species.

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 Texas Tech University and with Texas A&M Western 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 entire Cross Bar Ranch is now being managed as a natural area with emphasis on fire as a significant natural process. Wildland fire has beneficial effects on the vegetation. However, due to the small size of the BLM lands, wildland fires must be kept to relatively small sizes to prevent their spread onto adjoining private lands.

The full range of fire management activities will be used to help achieve ecosystem sustainability, including its interrelated ecological, economic, and social components. The field office staff will conduct fuels treatment, community assistance, education/mitigation programs and rehabilitation/restoration actions to implement management plan direction.

Fire, as a critical natural process, will be integrated into land and resource management plans and activities on a landscape scale and across agency boundaries. Response to wildland fire is based on the ecological, social, and legal consequences of the fire. The circumstances under which the fire occurs, and its likely consequences, dictate the appropriate response to the fire.

C. Wildland Fire Management Options

The BLM has actively managed this land only for a few years. Prior to that, the Bureau of Mines owned and managed the property. However, management of natural resources was not that agency's mandate. The lands were leased for grazing for over seventy years with no oversight provided whatsoever. Wildfires had limited potential to spread since there was little left to burn on the property after being grazed by approximately 1500 head of cattle on a year to year basis. Approximately 30 miles of fire lanes (dozer line) were built over the years along section lines. These were maintained on a yearly basis until approximately two years ago when they were allowed to begin to re-vegetate.

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

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:

Category C Fire Management Units are areas where a wildland fire is desired but there are ecological constraints that must be considered. These constraints are T&E species, visual and habitat considerations. These FMUs would receive a lower priority in multiple fire situations than would Category A or B FMUs. These are areas where wildland fire will enhance resource characteristics.

Category D Fire Management Units are areas where fire is desired and there are few to no constraints to its use. These areas offer the greatest opportunity to take advantage of the full range of options available for managing fire under the appropriate management response. These Fire Management Units are the lowest priority in a multiple fire situation and would have the highest likelihood to implement wildland fire use for resource benefit.

A map is attached as appendix to this plan showing each FMU.

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 have been designated as a Critical Habitat for the Arkansas River Shiner (ARS). The ARS has been classified as endangered species. Any fire lanes constructed near the river would have to be to standards established through consultation with the US FWS.

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 10 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 Natural Gas Pipeline of America 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 NGPL 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.

FMU Descriptions:

1. Flatlands (Category D)

Fire Management Priority Ranking

--Suppression:	Low
--RX & Non-fire Fuels Treatments:	High
--Community Assistance/Protection:	Low

Location: This FMU consists of most of the lands comprised by Cross Bar Ranch, 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.

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”.

Fire History: The area has had several fires over the past seventy years, but nothing major in the last 10 years. No wildfires have been recorded since BLM acquired the lands in 1998.

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.

Values at Risk: A large fire west of highway 287 may affect traffic by creating large amounts of smoke. There are potential fire impacts to ranches and private property which surround the Cross Bar Ranch. Fire at the wrong time off year may create erosion problems as well as wildlife habitat problems.

Communities at Risk: None

Fire Management Objectives: Under most conditions, wildland fire would have beneficial effects on the vegetation. Objectives are: Maintain existing native grasses; eliminate or reduce mesquite; create a grassland community; keep fires relatively small; reduce spread of noxious or invasive plants. In relation to the other FMUs, priorities are as follows: Protection - Medium; Rehabilitation - High; Restoration - Very High; Fuels - Very High.

Fire Management Strategies

Suppression: There is no need to attempt to stop the spread of a fire to protect resources. However, due to the proximity of private lands, wildfires need to be kept small to prevent spread to non-BLM lands.

- Wildfires will be suppressed at less than 100 acres
- No dozers/motorized vehicles will be allowed within 1/4 mile of perennial streams. Dozer use on existing roads is preferred; otherwise, dozer use requires management approval.
- Utilize existing roads, natural barriers, and existing “fire lanes” for containment when feasible.

Wildland Fire Use: Fire is desired in this area. However, due to the proximity of private lands, wildland fire use would seldom be a viable alternative.

Prescribed Fire: Prescribed fire will be used as the primary vegetation management tool. Early spring time burning 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. Prescribed fire will be used in conjunction with chemical and mechanical treatments and seeding to re-establish grasslands, to reduce succulents and shrub species, and to break up fuel continuity for hazardous fuels reduction.

Non-Fire Fuels Treatments: 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: Little need is anticipated for post fire rehabilitation. After every wildfire greater than 10 acres, the AmFO Resource Management Specialist will conduct an assessment of rehabilitation needs. Specific areas that may need rehabilitation are:

- wildfires greater than 100 acres
- wildfires burning on slopes greater than 30%

Community Protection/community Assistance: There are no communities in the vicinity of the BLM lands. However, priority will be given to protection of 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.

2. West Amarillo Creek (Category C)

Fire Management Priority Ranking

--Suppression:	High
--RX & Non-fire Fuels Treatments:	High
Community Assistance/Protection:	Low

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 Ranch. West Amarillo Creek is a tributary of the Canadian River.

Characteristics: This FMU consists of diverse riparian habitats in generally moderate to good condition. Water is present in West Amarillo Creek on a constant basis; there are also fish populations in some segments. Tamarisk has replaced the cottonwood and willow biome that once existed. There are no known sensitive plant species. The area serves as the primary habitat for a small herd of white tail deer as well as a small herd of mule deer.

Fire History: The area has had several fires over the past seventy years, but nothing major in the last 10 years. No fires have been recorded since BLM assumed management of this land.

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.

Values at Risk: Outside of the immediate riparian areas, fire would be generally beneficial. However, fire will damage efforts to re-establish cottonwood and willow along banks as well as extremely valuable riparian habitat.

Communities at Risk: None.

Fire Management Objectives:

Objectives are: Maintain existing native grasses; eliminate or drastically reduce tamarisk; re-establish cottonwood and willow community in riparian area. In relation to the other FMUs, priorities are as follows: Protection - High; Rehabilitation - High; Restoration - Very High; Fuels - Very High.

Fire Management Strategies

Suppression: The appropriate management response in this FMU is aggressive suppression.

--Limit wildfires to 10 acres 90% of the time.

--Dozer/grader use on existing roads is allowed; otherwise, management approval is required.

--Prevent fire from damaging cottonwood trees in riparian area

Wildland Fire Use: Wildland Fire Use is not planned for this FMU. Due to the proximity of private lands, wildland fire use would seldom be a viable alternative.

Prescribed Fire: Prescribed fire is desired as a method to eradicate tamarisk. Prescribed fire will be used to maintain grass lands outside the riparian vegetation. One hundred percent of the grasslands will be burned with prescribed fire on an average of once every five years.

Non-Fire Fuels Treatments: Mechanical and chemical treatments are desired as a method to eradicate tamarisk. One hundred percent of the tamarisk will be treated over a ten year period.

Post Fire Rehabilitation: All wildfires in the riparian vegetation (willow and cottonwood) will be evaluated for rehabilitation needs. Rehabilitation may include re-planting of cottonwoods and stream bank erosion control.

Fires burning on slopes greater than 30% will be evaluated for rehabilitation needs, which may include re-seeding and erosion control to prevent stream sedimentation.

Community Protection/community Assistance: There are no communities in the vicinity of the BLM lands. However, priority will be given to protection of several pipeline 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.

3 Horse Creek (Category C)

Fire Management Priority Ranking

--Suppression: **Medium**

--RX & Non-fire Fuels Treatments: **High**

--Community Assistance/Protection: **Low**

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

Characteristics: This FMU is characterized by canyon bottom topography with native grasses. There has been no livestock grazing for the past ten years. 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.

Fire History: The area has had several fires over the past seventy years, but nothing major in the last ten years. No fires have been reported since BLM acquired this land.

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.

Values at Risk: Fire at the wrong time off year may create erosion problems as well as wildlife habitat problems.

Communities at Risk: None.

Fire Management Objectives:

Objectives are: Maintain existing native grasses; eliminate or reduce mesquite; re-create a grassland community; keep future wildfires relatively small; reduce spread of noxious or invasive plants. In relation to the other FMUs, priorities are as follows: Protection - Medium; Rehabilitation - High; Restoration - Very High; Fuels - Very High.

Fire Management Strategies

Suppression: To minimize the threat of fire damaging the cottonwood/willow riparian vegetation, wildfires will be suppressed at less than ten acres.

--Dozer/grader use on existing roads is preferred; otherwise, management approval is required.
--Wildfires will be kept out of cottonwood and willow vegetation along the creek.

Wildland Fire Use: Fire is desired in this area. However, due to the proximity of private lands, wildland fire use would seldom be a viable alternative. Therefore, there are no plans for wildland fire use in this FMU.

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: All wildfires in the riparian vegetation (willow and cottonwood) will be evaluated for rehabilitation needs. Rehabilitation may include re-planting of cottonwoods and stream bank erosion control.

Fires burning on slopes greater than 30% will be evaluated for rehabilitation needs, which may include re-seeding and erosion control to prevent stream sedimentation.

Community Protection/community Assistance: There are no communities in the vicinity of the BLM lands. However, priority will be given to protection of several pipeline 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.

4. Ranch Creek (Category C)

Fire Management Priority Ranking

--Suppression:	Medium
--RX & Non-fire Fuels Treatments:	High
--Community Assistance/Protection:	Low

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. Ranch Creek is a tributary of the Canadian River.

Characteristics: This FMU is characterized by canyon bottom topography with native grasses. There has been no livestock grazing for the past ten years. Erosion gullies have rehabilitated themselves through time and rest. No roads exist into the canyon bottom.

Fire History: The area has had several fires over the past seventy years, but nothing major in the last ten years. No fires have been reported since BLM acquired this land.

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.

Values at Risk: Fire at the wrong time off year may create erosion problems as well as wildlife habitat problems.

Communities at Risk: None.

Fire Management Objectives:

Objectives are: Maintain existing native grasses; eliminate or reduce mesquite; re-create a grassland community; keep future fires relatively small; reduce spread of noxious or invasive plants. In relation to the other FMUs, priorities are as follows: Protection - Medium; Rehabilitation - High; Restoration - Very High; Fuels - Very High.

Fire Management Strategies

Suppression: To minimize the threat of fire damaging the cottonwood/willow riparian vegetation, wildfires will be suppressed at less than ten acres.

- Dozer/grader use on existing roads is preferred; otherwise, management approval is required.
- Wildfires will be kept out of cottonwood and willow vegetation along the creek

Wildland Fire Use: Fire is desired in this area. However, due to the proximity of private lands, wildland fire use would seldom be a viable alternative. Therefore, there are no plans for wildland fire use in this FMU.

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: All wildfires in the riparian vegetation (willow and cottonwood) will be evaluated for rehabilitation needs. Rehabilitation may include re-planting of cottonwoods and stream bank erosion control.

Fires burning on slopes greater than 30% will be evaluated for rehabilitation needs, which may include re-seeding and erosion control to prevent stream sedimentation.

Community Protection/community Assistance: There are no communities in the vicinity of the BLM lands. However, priority will be given to protection of several pipeline 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.

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 1998. 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. Instead, BLM will rely on the Potter County Fire Department to provide initial attack services under their statutory mandate to suppress fires on all lands within the county.

BLM also relies on the National Park Service at Lake Meredith National Recreation Area to provide extended attack support, and oversight of all suppression operations.

BLM will maintain communication and coordination with these cooperators, and is in the process of formalizing agreements with both agencies.

The operational roles of the BLM in the wildland/urban interface are wildland firefighting, hazardous fuels reduction, cooperative prevention and education, and technical assistance. Structural fire suppression is the responsibility of tribal, State, or local governments, as described in the Interagency Standards for Fire and Fire Aviation Operations.

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. A long-term goal is to establish a recreation or law enforcement staff for patrol and public contact. This staff will have fire prevention activities as an integral part of their duties.

In the future, prevention efforts will be coordinated with the Potter County Fire Department 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 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 include Dispatch Recorder, Personnel Time Recorder, Equipment Time Recorder, and Equipment Manager. State Office funding is made available to train employee 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 helicopter operations require staff to be on-site on the BLM lands 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 cooperator aircraft for fire suppression within 200 miles of Amarillo.

8. Initial Attack

Initial attack will be provided by the Potter County Fire Department under cooperative agreement and under their sanction by the State of Texas to provide initial attack services on all lands within the county.

9. Extended Attack and Large Fire Suppression

The fire management staff from Lake Meredith National Recreation Area will provide oversight and logistical support for extended attack and large fire suppression operations. A cooperative agreement is being developed to formalize this support.

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

10. Other Fire Suppression Considerations

Negotiations are underway with Lake Meredith National Recreation Area to establish an interagency fire management program, where the NPS Fire Management Officer (FMO) would serve as an interagency FMO for both NPS and BLM. Upon completion of the agreement and implementation of this organization, this FMP will be revised to reflect the interagency program.

B. Wildland Fire Use

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 use for resource benefit.

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 wildland fire use 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 detailed from either a cooperating agency or from another BLM Field Office. Prescribed burns will be conducted with equipment and qualified personnel from other BLM offices, cooperating agencies, or from private contractors.

2. Air Quality and Smoke Management

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.

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.

--Large fires of greater than 50 acres and high intensity fires which may have the effect of sterilizing the soil should be examined for erosion potential.

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.

BLM does work closely with the Potter County Fire Department. This is the only fire department in Texas that BLM interacts with, and therefore BLM supports Potter County through the Rural Fire Assistance (RFA) program. RFA funds are offered annually to Potter County 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 BLM New Mexico State Office fire staff, from other BLM Field Offices, and from cooperating agencies. Expertise for prescribed burns and fuels activities is also obtained from cooperators or other BLM offices.

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

Funding for prescribed burns and hazardous fuels reduction projects is available on a project-by-project basis. However, AmFO has no base funding in hazardous fuels management.

B. Assistance Agreements and Intra/Interagency Agreements

Cooperative agreements are being developed between the BLM and the NPS at Lake Meredith National Recreation Area. The goal is to create an interagency fire management program where the NPS Fire Management Officer would serve as FMO for both agencies.

C. Equipment Rental Agreements

No emergency equipment rental agreements (EERAs) are available in the vicinity. If equipment was needed, the closest source would be the Albuquerque or Santa Fe Zone Dispatch Centers, each of which maintain EERAs in their Service and Supply Plans.

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.

Prescribed fire services are available and have been used in the past from Texas Tech University in Lubbock.

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.

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.

Appendices