

**ENVIRONMENTAL ASSESSMENT
FINDING OF NO SIGNIFICANT IMPACT
AND DECISION RECORD**

Roswell Field Office Sacaton Prescribed Fire
EA No: NM-512-06-023

Location:

Bureau of Land Management, Roswell Field Office, Chaves, Lincoln, Quay, Guadalupe, Curry,
Roosevelt, and De Baca counties

October 24, 2005

Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

I. Introduction

A. Background Information

The Bureau of Land Management (BLM) - Roswell Field Office (RFO) encompasses seven counties in southeast New Mexico. The counties are Chaves, Lincoln, Quay, Guadalupe, Curry, Roosevelt, and De Baca. This land area is about 13.9 million surface acres, of which 1.49 million is public land administered by the BLM. The largest tracts of public land are found in Chaves and Lincoln County.

The Roswell Resource Management Plan (RMP) and Record of Decision, which guides the long term management of the public land within the RFO, was approved in October 1997. Within the RMP are the decisions concerning Vegetation Management, Watershed Management, Special Status Wildlife and Plant Species Management, Wildlife Habitat Management, and Fire Management.

Giant sacaton (*Sporobolus wrightii*) reproduces exclusively by seed. It lacks specialized morphological seed dispersal mechanisms. Giant sacaton seed has low germination and establishment rates under high temperatures such as those found in the desert southwest (Sosebee, 1989). Giant sacaton grows mainly on low alluvial flats, bottomland, and arroyos subject to flooding (Bock, 1986; Cox, 1988; Haferkamp, 1982; Gay, 1965; Humphrey, 1970). In New Mexico giant sacaton forms nearly monotypic stands on broad floodplains. Giant sacaton, a warm-seasoned perennial bunchgrass, has a growth of three to six feet tall, and provides the highest nutritional value in the spring. It generally grows on sand, sandy loam, silty clay loam, and saline soil (Cox et al., 1989; Cox 1988; Schmutz et al., 1992; Henrickson, 1974; Welsh et al., 1987). Giant sacaton occurs at elevations of 3,100 to 7,000 feet (930-2,100 m) in New Mexico.

Alkali sacaton (*Sporobolus airoides*) is a native, long-lived, warm-season, densely tufted perennial bunchgrass ranging from 20 to 40 inches in height, and it is notable for its tolerance to alkaline soil, drought, flooding, moderate grazing, and mining disturbance. It is an important forage species in many areas, particularly in the Southwest. Alkali sacaton reproduces from seeds and tillers. Seed production is abundant, and seeds remain viable for many years (Blaisdell, 1984). The reproductive time period is from April to May.

B. Need for the Proposed Action

Alkali sacaton has been encroaching on habitat that was historically giant sacaton. Furthermore, giant sacaton has remained in a state of decadent growth that has further degraded rangeland conditions over much of the arroyo bottoms within the RFO. This proposed action would enhance vegetation and species diversity. New vegetation growth would benefit the watershed, wildlife and livestock. New sacaton growth is important to the watershed because it may slow runoff, enhance infiltration, and trap sediments from washing into rivers or streams. The burning of sacaton would also create a food source for wildlife and livestock that was not available before.

C. Conformance with Land Use Plans:

The proposed activity is addressed as part of the Roswell Resource Management Plan and Record of Decision (October 1997), and the New Mexico Record of Decision dated July 1991, for the *Vegetation Treatment on BLM Land in Thirteen States*, Final Environmental Impact Statement of May 1991. In addition, the Fire and Fuels Management Plan Amendment and Environmental Assessment (EA) approved on September 16, 2004. The Plan Amendment adjusts nine Resource Management Plans in eight Field Offices in New Mexico and Texas.

The amendment incorporates current national fire management policy into Resource Management Plans, with the goals of:

- Restoring fire as an integral part of fire-adapted ecosystems.
- Reducing hazardous fuels to improve the protection of human life and property.
- Establishing consistent methods of managing fire and fuels.

The Plan Amendment:

- Establishes Field Office wide objectives for fire and fuels management.
- Delineates fire management units and fire management categories.
- Identifies broad vegetation treatments. Identifies general restrictions on fire management practices.
- Determines the criteria for changing fire management units.

D. Relationship to Statues, Regulations, or Other Plans:

The management of sacaton as a range improvement, either under Cooperative Agreement or Range Improvement Application, is addressed under the 43 Code of Federal Regulations, Parts 4100, Grazing Administration, Exclusive of Alaska, Subpart 4120.3.

Other Statues, Regulations or Plans are:

The vegetation treatment on sacaton is consistent with:

- The Taylor Grazing Act of 1934, as amended (43 U.S.C. 315 (a)-(®)),
- The Federal Land Policy and Management Act of 1976, as amended (Pub. L. 94-579, 43 U.S.C. 1702 et seq), sections 302 (a) & (b), Section 502 (a) & (c),
- The Public Rangeland Improvement Act of 1978, as amended (Pub. L. 95-514, 43 U.S.C. 1901 et seq),
- The National Environmental Policy Act of 1969, as amended (Pub. L., 91- 190, 42 U.S.C. 4321-4347) Sec. 101,
- Carlson-Foley Act of 1968,
- Federal Noxious Weed Act of 1974, as amended (Management of Undesirable Plants on Federal Land, 1990 Sec.15),
- The Final Supplemental Environmental Impact Statement for Noxious Weeds, 1987,
- The Clean Water Act of 1977, section 404,
- BLM Manual 9014 and,
- BLM Manual 9015.

II. Proposed Action and Alternatives

A. Proposed Action

Prescribed Fire

The proposed action is to burn sacaton bottomland where it has been identified as requiring treatment on public land throughout the Roswell Field Office area, and other holdings in cooperation with other private stakeholders, state and federal agencies. The proposed allowable area would include the sacaton bottomland and the adjacent upland. This action could occur yearlong, however the most effective time periods are between January and May prior to spring precipitation patterns and green-up. Furthermore, this time frame coincides with the availability of firing and holding resources and the relatively low fire activity period of this region.

Preparation

Range improvements and facilities would be properly protected from fire by mechanically removing or burning the vegetation 15 feet around improvements or roads. Furthermore, mechanical preparation may be used to construct safe control lines or safety zones as is determined on a site by site evaluation.

Grazing and Monitoring

Livestock grazing within the project area would be deferred prior to and after burning (until the re-growth averages a height of 6 inches or greater). Other circumstances may affect the release of livestock into the project area other than 6-inch height of sacaton (e.g., overall range condition of the pasture based upon range monitoring). Monitoring of the site prior to and after the prescribed fire will indicate if livestock management changes are necessary (e.g., stocking rate, duration and deferment). Co-operative agreements will be initiated prior to the proposed action.

This proposed action area would include all of the land within the RFO boundary. A site specific Documentation of Land Use Plan Compliance and NEPA Adequacy (DNA) or Environmental Assessment (EA) would be written for each proposed area and tiered to this EA prior to any action. When areas are identified, this proposed action would be conducted periodically.

B. Alternatives

1. No Action

If no action is taken the existing situation will continue. Little or no nutritional use of the area will occur by wildlife or livestock, and water retention conditions will remain low. This “no action” option will ultimately leave the area stagnant. This alternative will be the least costly in dollars.

2. Alternatives Considered But Not Analyzed in Detail

Chemical treatment and mechanical treatment have also been considered for achieving these goals. These methods have been discounted due to cost, adverse surface disturbance and feasibility.

AFFECTED ENVIRONMENT

Critical elements that are not present or not affected include: hazardous or solid wastes; prime and unique farmland; archeological concerns; wild and scenic rivers; wetland/riparian areas; and wilderness. Cultural inventory surveys would continue to be required for federal actions involving surface disturbing activities. The impact of the proposed action and alternatives to minority or low-income populations or communities has been considered and there is no significant impact anticipated.

The critical elements that may possibly be affected are listed below.

1. Air Quality: The areas of the proposed action are considered a Class II air quality area. A Class II area allows for moderate amounts air quality degradation. The primary sources of air pollution are dust from blowing wind on disturbed or exposed soils, smoke during prescribed fire events, and exhaust emissions from motorized equipment. The prevailing winds for the resource area are a southwest wind.
2. Soil: Detailed information on soil in the Roswell Field Office Area is available in the Soil Survey of Soil Survey of Chaves County, N.M. Northern Part, Soil Survey of Chaves County, N.M. Southern Part (SCS 1980), Soil Survey of Curry , N.M. (SCS 1953), Soil Survey of De Baca County, N.M. (SCS 1982), Soil Survey of Eddy Area N.M. (SCS 1971), Soil Survey of Lea County, N.M. (SCS 1974), Soil Survey of Lincoln County Area , N.M. (SCS 1980), Soil Survey of Otero Area, N.M. (SCS 1976), Soil Survey of Roosevelt County, N.M. (SCS 1967), and the Soil Survey of Southwest Quay Area, N.M. (SCS 1960). A copy of these publications may be reviewed at the BLM Roswell Field Office or at a local NRCS office. Soil descriptions will be included in the DRASTIC analysis for each pesticide treatment project.
3. Floodplains: Portions of the potential project area are located in the 100-year floodplain or Zone A or "Area of the 100-year flood". The 100-year floodplain ranges in width from less than one-quarter mile to more than one mile in the project area. For administrative purposes, the 100-year floodplain serves as the basis for floodplain management on public land. It is based on Flood Insurance Rate Maps prepared by the Federal Emergency Management Agency (1983). Current development within the floodplain includes roads, oil and gas developments, pipelines, and miles of fence.

In general, the Pecos River channel is moderately entrenched and slightly confined by the valley. Pecos River Channel banks are relatively stable, but are actively being cut in some locations. This is most likely due to entrenchment of the channel rather than disturbance associated with land use activities. The Pecos River channel material is primarily a sand/silt bed with small to medium debris and the stream gradient is relatively flat (0.25 percent).

The riparian vegetation community is tied to landform within the floodplain and is

influenced by flooding intervals. The land form is comprised of exposed and stabilized river bars, the floodplain, and terraces.

Watersheds and soils that are susceptible to severe gully erosion are listed within the Roswell Approved Resource Management Plan and Record of Decision (RMP), October 1997.

4. Water Quality – Drinking/Groundwater: Recharge of the Roswell ground-water basin is primarily by infiltration from precipitation, with influent from intermittent streams and subsurface underflow as secondary sources. The artesian aquifer receives water from the central part of the western recharge area. The direction of ground water flow is generally in the east direction.

The Roswell ground-water basin generally consists of three components. First is an eastward dipping carbonate aquifer that is closely related to the San Andres limestone. It is often called the “artesian aquifer” though it is unconfined to the west.

Fresh groundwater for domestic, irrigation, and stock use can be obtained from deposits of Quaternary Alluvium, Artesia Group and the San Andres Formation in the area. Known depths to water range from 1 foot to approximately 700 feet + (New Mexico Office of the State Engineer data).

The Artesia Group comprises the second component of the basin, a leaky “confining bed” overlaying the carbonate aquifer. The eastward dipping formations of the Artesia Group thin to a wedge near the allotments. Significant upward movement of water from the artesian aquifer to the shallow aquifer probably occurs in the allotment area. Finally, the confining bed is overlain by a water table aquifer of Quaternary alluvium, commonly called the “shallow aquifer”.

Fresh groundwater for domestic, irrigation, and stock use can be obtained from deposits of Quaternary Alluvium, Gatuna Formation, Cub Mountain, Mesaverde Group, Mancos Shale, Dakota Sandstone, Chinle Formation, Santa Rosa Formation, Dewey Lake Formation, Rustler Formation, Salado Formation, Artesia Group and the San Andres Formation. Known depths to water range from 1 foot to approximately 700 feet + (New Mexico Office of the State Engineer data).

Fresh surface water can be obtained from perennial and ephemeral rivers and streams, ephemeral playas, perennial and ephemeral springs, and natural or manmade dirt water holding tanks. The Pecos River and the Rio Bonito River are considered to be perennial rivers.

5. Vegetation/Noxious Weeds: Vegetative communities managed by the Roswell Field Office are identified and explained in the RMP/EIS (1997). Appendix 11 of the draft RMP/EIS describes the Desired Plant Community (DPC) concept and describes the components of each community. Range site descriptions are also available for review at the Roswell BLM office or any Natural Resources Conservation Service office.

Riparian vegetation along the river banks include pockets of Baltic rush, threesquare and cattail. Woody vegetation within the lower floodplain include

seepwillow, coyote willow, saltcedar, and Russian olive. Alkali sacaton (*Sporobolus airoides*), giant sacaton (*Sporobolus wrightii*), alkali muhly, and inland saltgrass are the most common grass species. Common forb species include goldenrod (*Solidago* spp.), ragweed (*Ambrosia psilostachya*), Douglas rabbitbrush (*Chrysothamnus viscidiflorus*), prairie sunflower, and white sweetclover (*Melilotus alba*). Older cottonwood trees can be found in several areas and typically occur on higher elevation sandbars and terraces above the active floodplain. Many acres within the floodplain of the river are dominated by saltcedar growing in patches, strips, or dense thickets. A few hundred acres support cottonwood trees with open canopies. Adjacent upland vegetation is mesquite/alkali sacaton shrubland which is encroaching into the floodplain.

Noxious Weeds - A noxious weed is defined as a plant that causes disease or has other adverse effects on the human environment and is, therefore, detrimental to the public health and to the agriculture and commerce of the United States. Generally, noxious weeds are aggressive, difficult to manage, parasitic, are carriers or hosts of harmful insects or disease, and are either native, new to, or not common in, the United States. In most cases, however, noxious weeds are non-native species.

The list currently includes the following weeds: 1) African rue (*Peganum harmala*), 2) black henbane (*Hyoscyamus niger*), 3) bull thistle (*Cirsium vulgare*), 4) camelthorn (*Alhagi pseudalhagi*), 5) Canada thistle (*Cirsium arvense*), 6) dalmatian toadflax (*Linaria genistifolia dalmatica*), 7) goldenrod (*Solidago canadensis*), 8) leafy spurge (*Euphorbia esula*), 9) Malta starthistle (*Centaurea melitensis*), 10) musk thistle (*Carduus nutan*), 11) poison hemlock (*Conium maculatum*), 12) purple starthistle (*Centaurea calcitrapa*), 13) Russian knapweed (*Acroptilon repens*), 14) Scotch thistle (*Onopordum acanthium*), 15) spotted knapweed (*Centaurea maculosa*), 16) teasel (*Dipsacus fullonum*), 17) yellow starthistle (*Centaurea solstitialis*), 18) yellow toadflax (*Linaria vulgaris*), 19) Russian-olive (*Elaeagnus angustifolia*), 20) Tamarix species (*Tamarix* spp.), 21) Siberian elm (*Ulmus pumila* L.).

Of the noxious weeds listed, the ones with known populations in the Roswell Field Office are African rue, non-native *Cirsium* spp. musk, bull, Scotch thistle and Canada thistle, leafy spurge, goldenrod, Malta starthistle, Russian knapweed, Russian-olive and saltcedar. Tamarix species are listed as noxious weeds by the State of New Mexico. Also "problem weeds" of local concern are cocklebur (*Xanthium strumarium*), buffalobur (*Solanum rostratum*) and spiny cocklebur (*Xanthium spinosum*). "Problem weeds" are those weeds which may be native to the area but whose populations are out of balance with other local flora.

Goldenrod is considered a plant of local concern because of its poisonous nature to livestock during the dormant season. Russian-olive is the predominant non-native, invasive species, other than saltcedar, in the immediate area of the proposed project area within the bottomland. A site specific review would be conducted to assure that no other noxious species are in the immediate area of each proposed project site.

Infestations of noxious weeds can have a disastrous impact on biodiversity and natural ecosystems. Noxious weeds affect native plant species by out-competing native vegetation for light, water and soil nutrients. Noxious weeds cause \$2 to \$3 billion in estimated losses to producers annually.

These losses are attributed to: (1) Decreased quality of agricultural products due to high levels of competition from noxious weeds; (2) decreased quantity of agricultural products due to noxious weed infestations; and (3) costs to control and/or prevent the noxious weeds.

Furthermore, noxious weeds can negatively affect livestock and dairy producers by reducing palatable forage, or by increasing the occurrence of toxic forage available to livestock. Consequently, noxious weeds will decrease livestock productivity and increase the operator's costs of feeding and providing health care to entire herds. Increased costs to operators are eventually borne by consumers.

Noxious weeds also affect recreational uses, and reduce realty values of both the contaminated properties and the adjacent properties.

Recent federal legislation has been enacted requiring state and county agencies to implement noxious weed control programs. Monies would be made available for these activities from the federal government, generated from the federal tax base. Therefore, all citizens and taxpayers of the United States are directly affected when noxious weed control/prevention is not exercised.

6. Visual Resource: The proposed action area is listed as a class II and III visual resource. Visual Resources within this area will not be affected due to the isolated location and the prevailing winds.

7. Range Management: The public land in the project area is interspersed with BLM designated grazing allotments. Livestock grazing is authorized under current permit only. Prior to any treatment being implemented, close coordination would be conducted with the BLM allottee and any other affected interest to ensure the success of the project.

8. Wildlife Habitat/Special Status Species: Numerous avian species use the Pecos River corridor and adjacent arroyos during spring and fall migration, including nongame migratory birds. The Bitter Lake National Wildlife Refuge is located within the RFO and serves as a major focal point for migratory birds (e.g., ducks, geese, sandhill cranes, and waterbirds). Common bird species are mourning dove (*Zenaida macroura*), mockingbird (*Mimus polyglottos*), white-crowned sparrow (*Zonotrichia leucophrys*), black-throated sparrow (*Amphispiza bilineata*), blue grosbeak (*Guiraca caerulea*), northern oriole (*Icterus galbula*), western meadowlark (*Sturnella neglecta*), Crissal thrasher (*Toxostoma crissale*), western kingbird (*Tyrannus verticalis*), northern flicker (*Colaptes auratus*), common nighthawk (*Chordeiles minor*), loggerhead shrike (*Lanius ludovicianus*), and roadrunner (*Geococcyx californianus*). Raptors include northern harrier (*Circus cyaneus*), Swainson's hawk (*Buteo swainsoni*), American kestrel (*Falco sparverius*), and occasionally Golden eagle (*Aquila chrysaetos*) and Ferruginous hawk (*Buteo regalis*).

Common mammal species using the RFO include mule deer (*Odocoileus hemionus*), pronghorn antelope (*Antilocapra americana*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), striped skunk (*Mephitis mephitis*), porcupine (*Erethizon dorsatum*), raccoon (*Procyon lotor*), badger (*Taxidea taxus*), jackrabbit (*Lepus* spp.), cottontail (*Sylvilagus* spp.), white-footed mouse (*Peromyscus leucopus*), deer mouse (*Peromyscus*

maniculatus), grasshopper mouse (*Onychomys leucogaster*), kangaroo rat (*Dipodomys* spp), spotted ground squirrel (*Spermophilus spilosoma*), and wood rat (*Neotoma* spp.).

A variety of herptiles also occur in the area such as yellow mud turtle (*Kinosternon flavescens*), box turtle (*Terrapene ornata*), eastern fence lizard (*Sceloporus undulatus*), side-blotched lizard (*Uta stansburiana*), horned lizard (*Phrynosoma* spp.), whiptail (*Cnemidophorus* spp.), hognose snake (*Heterodon nasicus*), coachwhip (*Masticophis flagellum*), gopher snake (*Pituophis melanoleucus*), rattlesnake (*Crotalus* spp.), and spadefoot toad (*Scaphiopus* spp.).

Special Status Species

The Bald eagle and the Pecos gambusia are listed as federally endangered with the Interior least tern and Pecos sunflower listed as threatened and the Pecos bluntnose shiner listed as threatened with critical habitat. These five federally listed threatened and or endangered species can occur in or adjacent to or migrate through the project area.

**THREATENED AND ENDANGERED SPECIES THAT MAY OCCUR
WITHIN THE ASSESSMENT AREA**

<u>COMMON NAME</u>	<u>FEDERAL LISTINGS</u>
Bald Eagle	Endangered
Interior Least Tern	Endangered
Yellow-billed cuckoo	Candidate
Southwestern Willow Flycatcher	Proposed Endangered w/ critical habitat
Pecos Bluntnose Shiner	Threatened with critical habitat
Pecos Pupfish	Candidate
Pecos Gambusia	Endangered
Koster's Tryonia	Proposed
Roswell Springsnail	Proposed
Pecos Assiminea	Proposed
Noel's Amphipod	Proposed
Pecos Sunflower	Threatened

A discussion of the primary species of concern follows:

Pecos Bluntnose Shiner (*Notropis simus pecosensis*) - Federal Threatened

Historically, the Pecos Bluntnose Shiner inhabited the river from Santa Rosa to near Carlsbad, New Mexico. Currently, the subspecies is restricted to the river from the Fort Sumner area southward locally to the vicinity of Artesia, and seasonally in Brantley Reservoir (NMDGF 1988; USFWS 1992). Routine fish community monitoring conducted by the USFWS in the river between Sumner Dam and Brantley Reservoir show the fish remains generally abundant, especially in light of cooperative efforts between the Bureau of Reclamation and the USFWS to more closely mimic natural flows in the Pecos River.

There are two designated critical habitat areas on the Pecos River within the RFO area. The first is a 64-mile reach beginning about ten miles south of Fort Sumner (Township 1 North), downstream to a point about twelve miles south of the DeBaca/Chaves County line (Township 5 South). The second reach is from Highway 31 east of Hagerman (Township 14 South), south to Highway 82 east of Artesia (Township 17 South). The allotment does not fall within these reaches.

Pecos Gambusia (*Gambusia nobilis*) - Federal Endangered

The Pecos Gambusia is endemic to the Pecos River Basin in southeastern New Mexico and western Texas. Historically, the species occurred as far north as the Pecos River near Fort Sumner, and south to Fort Stockton, Texas.

Recent records indicate, however, that its native range is restricted to sinkholes and springs and their outflows on the west side of the Pecos River in Chaves County. In spite of population declines, the species remains locally common in a few areas of suitable habitat. Populations on the BLNWR and the Salt Creek Wilderness Area constitute the key habitat of the species in the RFO area. On the refuge, the gambusia is primarily restricted to springs and sinkholes in the Lake St. Francis Research Natural Area.

Interior Least Tern (*Sterna antillarum athalassos*) - Federal Endangered

The Interior Least Tern nests on shorelines and sandbars of streams, rivers, lakes, and man-made water impoundments. Records of breeding terns in New Mexico are centered around BLNWR where the species has bred regularly since it was first recorded in 1949. BLNWR is considered "essential" tern breeding habitat in the state. Besides BLNWR, the only known nesting habitat in the RFO area is an alkali flat due north of the refuge on public land. These are small populations with only a few nesting terns.

Sporadic observations of least terns have been recorded elsewhere in the Pecos River valley. The tern may occur on public land in Chaves County along the river because suitable nesting habitat is found on sites that are sandy and relatively free of vegetation (i.e., alkali flats). Approximately 44 potential nesting sites are found throughout the RFO area. Other potential habitat sites are saline, alkaline, or gypsiferous playas that occasionally hold water. However, ephemeral playas do not support fish, the main staple for terns.

Specific surveys for nesting least terns have been conducted in potential habitat along the Pecos River and playas by the New Mexico Natural Heritage Program

under a Challenge Cost Share project. No other nesting terns have been found to date.

Pecos (Puzzle) Sunflower (*Helianthus paradoxus*) - Federal Threatened

The Pecos Sunflower is found along alkaline seeps and cienegas of semi-desert grassland and short-grass plains (4,000-7,500 ft.). Plant populations are found both in water and where the water table is near the ground surface.

In the RFO area, the sunflower is found in only a few areas outside of the BLNWR. In 1994, a new population was found growing on the margins of Lea Lake and its outflow at Bottomless Lakes State Park. Lloyd's Draw, east of the Pecos River, has the only known Pecos sunflower population on BLM land, which only became evident following a prescribed fire. Potential habitat also occurs on BLM land within the Overflow Wetland Area of Critical Environmental Concern (ACEC).

Potential habitat for the sunflower occurs on the allotment as low lying areas where the water table is near the ground surface. The low lying areas are not necessarily along the existing river channel, but in old channel courses and oxbows. These areas are now invaded by saltcedar growing in dense stands, which may prevent the viability of the Pecos sunflower. Other potential sites include a few springs on the east side of the river.

9. Caves or Karst: Karst terrain consists of numerous sinkholes, disappearing streams and underground drainage systems. In karst areas, erosional processes, which would normally act on the surface, are concentrated below ground. The RFO is interlaced with caves and karsts. Therefore, the potential for a cave/karst to fall within a treatment area is possible. For a detailed table and map of caves or karsts, refer to the RMP/EIS (1997) Appendix 3, Table A3-1 and Map A3-1.

11. Archaeological concerns: Archaeological and historic resources are found throughout the Roswell Field Office area of jurisdiction. The possibility of finding cultural sites retaining integrity is low due to periodic flooding. In areas where sacaton exists it is the prevalent fuel, and it typically covers the ground surface so densely that ground visibility is very low. Finding cultural material prior to the proposed action within the project is not possible due to the lack of ground visibility. This proposed action may include the use of mechanical line construction which would create minor ground disturbance.

ENVIRONMENTAL IMPACTS

A. Impacts of Proposed Action

1. Air Quality: Air quality will suffer a short-term decrease on burn days and for a few days following the burn. There will be no long-term significant impacts associated with smoke particulate. The proposed action area is in a secluded, semi-arid rangeland, with prevailing southwest winds that will disperse smoke rapidly.

2. Soil: The RMP has a list of areas that show a possibility for gully erosion concern. These areas can be found on Map 41, chapter 3 of the Draft Roswell RMP/EIS. Any soil erosion associated with this proposed action will be minimal due to the relatively fast green up and vegetation recovery.

It has been documented that watersheds can be positively affected by prescribed burning. Increased herbaceous growth provides increased infiltration rates and recharge of natural watershed storage. These positive impacts would be long term (2-5 years). Seasonal precipitation patterns will also stimulate growth of sacaton later in the growing season, which will further stabilize the area.

3. Water Quality: Direct impacts to surface water quality would be minor, short-term impacts during storm flow. Indirect impacts to water-quality related resources, such as fisheries, would not occur. The proposed action would not have a significant effect on ground water. The timing of the burn would not take place during the high precipitation months of July through October, and the soil would filter potential contaminants.

4. Vegetation: Initial burning will reduce 80-100 percent of the standing vegetation. The sacaton and forbs species, associated with the drainage, will regenerate vigorously. Burning of the decadent growth will provide palatable vegetation for wildlife and livestock. Ultimately, the new palatable vegetation may also increase a mosaic of wildlife in the area, by developing a usable habitat.

5. Visual Resource Management: The proposed action area is in a class IV visual resource management zone. Areas that are blackened by the burn will green up within 21 to 45 days after treatment. The potential of straight lines and stark contrasts in texture and color will be mitigated, at least in part, by the mosaic burn pattern produced. This mosaic during green up will provide a variety of contrast within the vegetation. The long-term vegetation variety of this location will continue to increase in excess of one year.

6. Range Management: Grazing will occur previous to the burn during the winter months. This should not affect the prescribed fire. Livestock will not utilize giant sacaton in the winter months. Livestock grazing will continue under the terms and conditions of grazing permits administered by the Bureau of Land Management.

7. Wildlife Management: Impacts to wildlife will be short term. Some mortality of small animals, reptiles and birds may occur. In most cases, this mortality will be minimal in the larger scale of things and most wildlife will be displaced in the short term. In the long term, wildlife will return and reestablish within the proposed area.

8. Caves or Karst: If a cave or karst is located every effort will be used to protect the resource.

9. Noxious Weeds: Cattle stocked on the allotment, supplemental feeds, and a variety of equipment may unintentionally contribute to the establishment and spread of noxious weeds. Noxious weed seed could be carried to and from the allotment by livestock, feed and equipment. The main mechanism for seed dispersion is by equipment previously used in noxious weed-infested areas.

Infestation of noxious weeds can have a potentially disastrous impact on biodiversity and natural ecosystems. In order to combat the negative effects of noxious weeds on crop land, grazing land and waterways, herbicidal and other weed control strategies can be implemented at further costs to producers and government agencies. The potential for the dissemination of invasive and noxious weed seed on public land would remain low due to the limited use of the land and increased public awareness of the noxious weed problem. The requirement of washing equipment would reduce the potential for infesting the project area. Any populations of noxious weeds found on the allotment would be treated according to prescribed control methods for the particular species encountered.

10. Archeological Concerns: A map of the proposed fire will be required by cultural resources along with details as to whether there will be surface disturbance created for fire lines, etc. Surface disturbance outside of the floodplain will likely require a cultural inventory survey. A map will also allow a cultural records check to see if there are previously recorded sites that might be impacted by the fire and would require site avoidance measures.

11. Threatened and Endangered Species: Impact to wildlife would naturally be short term following the prescribed burn. As with any fire, whether natural or man caused, some mortality of small animals, reptiles and birds would occur. In most cases, wildlife would be displaced in the short term by the fire and the loss of surrounding vegetation and then would return when vegetation begins to grow back. Some shift of wildlife may occur within the burned areas. Species favoring dense, heavy brush may vacate the area, while species favoring open or savannah type habitat may inhabit the area.

B. Impacts of Alternatives

If the “no action” alternative is selected the area will remain unchanged. Decadent sacaton, relatively unusable by wildlife and livestock, will remain the dominant member of the areas plant community.

MITIGATION MEASURES

A. Proposed Action:

No impacts are anticipated that require mitigation as long as the action stays within the parameters set forth in the burn plan and the proposed action.

B. No Action Alternative:

No mitigation is necessary with this alternative, as none of the above impacts will take place.

RESIDUAL IMPACTS

The area will remain in a post-burned state until green-up occurs in the spring. No long-term impacts are expected in the area. No cumulative impacts are anticipated. No other management actions or environmental impacts are expected as a result of this action.

CUMULATIVE IMPACTS

The cumulative impacts of the proposed action would be minimal. The cumulative impacts of the No Action alternative would be more drastic than the proposed action. Increasing the palatable forage enhances the effectiveness of grazing and wildlife habitat management programs.

Roads, fences, stock trails and water well development have occurred in the past and may contribute to the cumulative impacts of the area. The proposed action on its own will not contribute significantly to the cumulative impacts to the area.

Participating Staff and Affected Interests:

Michael McFerraz – Fuels Crew Module Leader, BLM
Alan Wyngaert – Fuels Specialist, BLM
Chuck Schmidt – Fire Management Officer, BLM
Joseph Navarro – Rangeland Management Specialist, BLM
Helen Miller – Rangeland Management Specialist/Weed Specialist, BLM
Dan Baggao – Wildlife Biologist, BLM
Michael McGee – Hydrologist, BLM
Paul Happel – Recreation Specialist, BLM
Pat Flanary – Archeologist, BLM
Irene M. Gonzales – Realty Specialist, BLM
Jerry Dutchover – Geologist, BLM

The following people or agencies have been consulted for their comments in regards to the proposed action. The comments and suggestions expressed during the consultation have been incorporated into this EA.

New Mexico State Land Representative for the Roswell Field Office
New Mexico Department of Game and Fish
New Mexico State Forestry Division
USDI Fish and Wildlife Service
USDA Forest Service
Bureau of Land Management
US Department of Defense

References

- Blaisdell, James P.; Holmgren, Ralph C. 1984. Managing Intermountain rangelands--salt-desert shrub ranges. Gen. Tech. Rep. INT-163. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Forest and Range Experiment Station. 52 p. [464]
- Bock, Jane H.; Bock, Carl E. 1986. Habitat relationships of some native perennial grasses in southeastern Arizona. *Desert Plants*. 8(1): 3-14. [478]
- Cox, Jerry R. 1988. Seasonal burning and mowing impacts on *Sporobolus wrightii* grasslands. *Journal of Range Management*. 41(1): 12-15. [3046]
- Cox, Jerry R. 1988. Seasonal burning and mowing impacts on *Sporobolus wrightii* grasslands. *Journal of Range Management*. 41(1): 12-15. [3046]
- Cox, J. R.; Gillen, R. L.; Ruyle, G. B. 1989. Big sacaton riparian grassland management: Seasonal grazing effects on plant and animal production. *Applied Agricultural Research*. 4(2): 127-134. [11117]
- Gay, Charles W., Jr.; Dwyer, Don D. 1965. New Mexico range plants. Circular 374. Las Cruces, NM: New Mexico State University, Cooperative Extension Service. 85 p. [4039]
- Haferkamp, Marshall R. 1982. Defoliation impacts on quality and quantity of forage harvested from big sacaton (*Sporobolus wrightii* Munro). *Journal of Range Management*. 35(1): 26-31. [24616]
- Henrickson, James. 1974. Saline habitats and halophytic vegetation of the Chihuahuan Desert region. In: Wauer, Roland H.; Riskind, David H., eds. Transactions of the symposium on the biological resources of the Chihuahuan Desert region, United States and Mexico; 1974 October 17-18; Alpine, TX. Transactions and Proceedings Series No. 3. Washington, DC: U.S. Department of the Interior, National Park Service: 289-314. [16063]
- Humphrey, Robert R. 1970. Arizona range grasses: Their description, forage value and management. Tucson, AZ: The University of Arizona Press. 159 p. [5567]
- Schmutz, E. M.; Smith, E. L.; Ogden, P. R.; [and others]. 1992. Desert grassland. In: Coupland, R. T., ed. Natural grasslands: Introduction and western hemisphere. *Ecosystems of the World 8A*. Amsterdam, Netherlands: Elsevier Science Publishers B. V: 337-362. [23832]
- Sosebee, R. E.; Wan, C. 1989. Plant ecophysiology: a case study of honeymesquite. In: Wallace, Arthur; McArthur, E. Durant; Haferkamp, Marshall R., compilers. Proceedings--symposium on shrub ecophysiology and biotechnology; 1987 June 30 - July 2; Logan, UT. Gen. Tech. Rep. INT-256. Ogden, UT: U.S. Department of Agriculture, Forest Service, Intermountain Research Station: 103-118. [5931]
- Welsh, Stanley L.; Atwood, N. Duane; Goodrich, Sherel; Higgins, Larry C., eds. 1987. A Utah flora. Great Basin Naturalist Memoir No. 9. Provo,

FINDING OF NO SIGNIFICANT IMPACT/RATIONALE

FINDING OF NO SIGNIFICANT IMPACT: I have reviewed this environmental assessment including the explanation and resolution of any potentially significant environmental impacts. I have determined the proposed action will not have significant impacts on the human environment and that preparation of an Environmental Impact Statement (EIS) is not required.

Rationale for Recommendations: The proposed action would not result in any undue or unnecessary environmental degradation. The proposed action will be in compliance with the Roswell Resource Management Plan and Record of Decision (October, 1997).

/s/ T R Kreager

12/6/05

T. R. Kreager,
Assistant Field Office Manager-Resources

Date

DECISION RECORD

Decision: I have reviewed this proposed action, including the environmental impacts and have determined that the proposed project is in conformance with the approved land use plan. Therefore, no further environmental analysis is required. It is my decision to implement the prescribed burning of sacaton bottomland within the Gallo Arroyo (see attached map). This action will occur between January and May prior to spring precipitation patterns and green-up. Livestock grazing within the project area will be deferred after burning until the average height of sacaton reaches 6 inches.

If you wish to protest this proposed decision in accordance with 43 CFR 4160.2, you are allowed 15 days to do so in person or in writing to the authorized officer, after the receipt of this decision. Please be specific in your points of protest. In the absence of a protest, this proposed decision will become the final decision of the authorized officer without further notice, in accordance with 43 CFR 4160.3. A period of 30 days following receipt of the final decision, or 30 days after the date the proposed decision becomes final, is provided for filing an appeal and petition for the stay of the decision, for the purpose of a hearing before an Administrative Law Judge (43 CFR 4.470).

The appeal shall be filed with the office of the Field Office Manager, 2909 West Second, Roswell, NM, 88201, and must state clearly and concisely your specific points.

/s/ T R Kreager

1/10/06

T. R. Kreager
Assistant Field Office Manager-Resources

Date