

**ENVIRONMENTAL ASSESSMENT
FINDING OF NO SIGNIFICANT IMPACT**

Gallo Prescribed Burn
EA No: NM-060-02-023

Location:

Township 2 South, Range 17 East,
Section 3 and Township 3 South, Range 17, Section 34

November 25, 2002

Bureau of Land Management
Roswell Field Office
Roswell, New Mexico

PURPOSE AND NEED FOR THE PROPOSED ACTION:

The purpose of the proposed action is to reduce standing vegetation within the Cola de Gallo Arroyo on the 63032 Dos Amigos and 63018 Ciclo Rosa grazing allotments by 80% using prescribed fire, and to increase the palatability of forage for livestock and wildlife.

Decadent growth of giant sacaton has degraded rangeland condition over much of the arroyo bottom. 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. By reducing this decadent growth through prescribed fire, stimulation of the root crown would re-invigorate plant growth within 21 to 45 days after the prescribed fire.

It has been determined that the proposed action conforms to the land use plan as outlined in the Roswell Approved Resource Management Plan and Record of Decision of October 1997.

LOCATION OF PROPOSED ACTION

This proposed action is located within Township 2 South, Range 17 East, Section 3 and Township 3 South, Range 17 East, Section 34. Refer to Map 1 for specific treatment location.

PROPOSED ACTION AND ALTERNATIVE

A. Proposed Action

The proposed action is to burn sacaton bottomlands within the Gallo Arroyo (see attached map) using BLM fire personnel. The proposed allowable area of 273 acres includes the sacaton bottomlands and the adjacent uplands. This action would occur 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. Range improvements and facilities would be properly protected from fire by mechanically removing or burning the vegetation 15 feet around improvements or roads. For further information concerning the prescription for the burn itself, please refer to the burn plan.

Livestock grazing within the project area would be deferred after burning until the average height of sacaton reaches 6 inches. 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 after the prescribed fire will

indicate if livestock management changes are necessary (e.g., stocking rate, duration and deferment).

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. 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 must be considered:

Critical elements that are not present or not affected include: hazardous or solid wastes; prime and unique farmlands; threatened or endangered species; archeological concerns; wild and scenic rivers; areas of critical environmental concern; floodplains; wetlands/riparian areas; and wilderness. The critical elements that may possibly be affected are listed below.

1. Air Quality: The proposed action is considered a Class II air quality area. A Class II area allows for moderate amounts of air quality degradation. The primary forms of air pollution are dust and exhaust emissions. The prevailing winds for the site is a southwest wind. The nearest community is the town of Corona, approximately 25 miles to the Northwest. Due to the distance, all smoke will be dissipated before reaching any communities or populations.

2. Soil: The *Soil Survey of Lincoln County Area, New Mexico, USDA Soil Conservation Service 1983* was used to describe and analyze impacts to soils. Soil types in the project area are represented by the Deama-Pastura association, moderately sloping. This map unit is on uplands with slope from 0 to 15 percent. Gabaldon soils on the valley floor are included in this unit area. For the most part these soils are very shallow and well drained, with rapid runoff and high hazard of water erosion. The hazard of soil blowing ranges from slight to high.

The area associated with this drainage is subject to wind and water caused erosion. Most of the erosion is isolated during the high precipitation months of July through October. Furthermore, soil moisture content allows sacaton to green up early in the spring and will reduce soil loss in the proposed area of the action.

Soil types serve as a basis for the development of range sites, which describe the vegetation site potential. Range site descriptions used in this analysis are from the Soil Conservation Service Technical Guides for New Mexico. The project area is comprised of the Shallow CP-2 ecological site.

The watershed and soil associated with this proposal has been listed within the Roswell Approved Resource Management Plan and Record of Decision (RMP), October 1997 as being susceptible to severe gully erosion.

3. Water Quality - Groundwater: There are no perennial streams, rivers or riparian areas in the area proposed for treatment. Ephemeral drainages cross the proposed project area. The project area is located in the northwest region of the Roswell ground-water basin. The Roswell basin can be described by its three main components, which are the carbonate artesian aquifer associated with the San Andres, the leaking confining bed associated with the Artesia Group overlaying the carbonate aquifer and the water table aquifer of Quaternary alluvium called the shallow aquifer. The project area is located on the first component, which is an eastward dipping carbonate aquifer that is closely related to the San Andres limestone. It is called the artesian aquifer and it is unconfined to the west.

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 average depth to groundwater ranges from 100 to 430 feet.

4. Vegetation: Vegetation within the burn site is in draws and bottomland and is comprised almost completely of sacaton with an invasion of thistle and cactus. The thistle is considered as an invasive species not native to New Mexico and is addressed under the Roswell Approved Resource Management Plan and Record of Decision (RMP), October 1997.

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

6. Range Management: This area is grazed by cattle under the terms and conditions of grazing permits administered by the Bureau of Land Management.
7. Wildlife Management: Wildlife found in the area includes mule deer, pronghorn antelope, upland game birds, various raptors, rodents and assorted reptiles. There is an occasional occurrence of Barbary sheep in the area. The Mountain Plover is also considered to utilize the general grassland community, but not brushy draw habitat.
8. Caves or Karst: While this site is in the high karst potential zone, no caves or karst features have been identified within the project area. If any cave entrances are found they would be GPS'd and protected.
9. Noxious Weeds: The noxious weed, Scotch Thistle occurs within the proposed area and is covered under the Noxious Weed Control EA (NM-066-98-044). Within the last year, this proposed area has been treated with an herbicide for Scotch Thistle.
10. Archeological concerns: This proposed action may include the use of mechanical line construction which would create minor ground disturbance.
11. Threatened and Endangered Species: The Mountain Plover has been documented to occasionally occur as far south as the proposed action area, but generally utilizes upland grassland habitat for breeding.

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. Soils: The RMP has listed the Gallo Arroyo as a possible gully erosion concern. Consequently, the time frame established and the fast green up phase of the sacaton will reduce any negative impacts of soil erosion. Furthermore, 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% 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.

After the proposed fire, short-term negative impact would occur after a precipitation event that produces stream flow. Ash may be suspended in the flow and deposited in downstream locations. Some soil erosion could occur if the stream flow is high in intensity. After vegetation has re-established, water quality should stabilize or increase due to better protection of the soil by herbaceous vegetation cover.

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: The proposed action may invigorate the Scotch Thistle seeds. Monitoring and surveying would be conducted after the prescribed burn. Every effort will be attempted to control and eradicate this weed

10. Archeological Concerns: The proposed action area has been surveyed and inventoried. The area has been declared free of any archeological artifacts.

11. Threatened and Endangered Species: There would be no effect to listed species, as they do not occur within the proposed project area. The impacts to the mountain plover would not be significant due to the habitat preference of the species within the grassland community (they do not utilize heavily vegetated bottomlands).

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 with the completion of the

proposed action. 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. The decadent growth of sacaton is not useable for forage by wildlife or domestic livestock.

Increasing the palatable forage enhances the effectiveness of grazing and wildlife habitat management programs. Scotch Thistle has been treated with an herbicide and an aggressive follow-up treatment program would have a positive cumulative effect of slowing or stopping widespread infestations.

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 it's own will not contribute significantly to the cumulative impacts to the area.

Participating Staff and Affected Interests:

Michael McFerraz – Fuels Crew Module Leader, BLM
Chuck Schmidt – Range Conservationist, BLM
Rand French – Wildlife Biologist, BLM
Mike McGee – Hydrologist, BLM
Mike Bilbo – Recreation Specialist, BLM
Pat Flanary – Archeologist, BLM
Irene M. Gonzales – Realty Specialist, BLM

Persons or Agencies Consulted:

Dos Amigos, Permittee
Cielo Rosa, Permitted

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

1/8/03

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

Date