

Proposed Action for the  
**Luna Chacon Livestock Grazing Allotment**  
 Camino Real Ranger District  
 Carson National Forest  
 Taos and Mora Counties, New Mexico

August 2008

**Purpose & Need and Proposed Action**

The Camino Real Ranger District, Carson National Forest, proposes to continue authorizing livestock grazing while incorporating adjustments and improvements outlined in Table 1, on the Luna Chacon Allotment (see Figure 1). The purpose and need for revising the grazing program is:

- 1) Livestock grazing on National Forest System lands has contributed to the local economy and the stability of northern New Mexico communities for over a hundred years. On the Luna Chacon Allotment, there is a need for forage availability to support domestic livestock and contribute to the economic diversity and social well being of surrounding communities that depend on range resources for their livelihood.
- 2) There is a need for good range condition with a stable or upward trend in the Romero Lake Pasture and in the Frijoles Canyon portion of the adjacent, vacant Olla Ranchos Allotment. Good range condition is indicated by a late seral stage (51-75% of the climax vegetation remains), along with effective ground cover (not more than 5-20% bare soil, depending on soil type) to provide forage for grazing animals (livestock and wildlife), maintain soil stability, and provide wildlife habitat.
- 3) Along the upper half of East Fork Luna Creek in Lower Luna Pasture and along Frijoles Creek in the adjacent Olla Ranchos Allotment there is a need for vegetative diversity, acceptable soil compaction levels, and in some places better riparian function.
- 4) Arizona willow has been identified as a sensitive plant species for the Southwestern Region. There is a small population of this plant growing within the La Presa Pasture. There is a need for a healthy, stable or expanding population of Arizona willow, which includes a range of age classes including young and middle-aged plants.
- 5) There is a need on the allotment and across the landscape for grassland meadows and open-canopied forested areas to have a productive herbaceous understory to provide forage for both wildlife and livestock. It has been recognized that fire historically played an important role in maintaining the open areas of many southwestern forests.

Table 1 outlines the purpose and need, the actions proposed to achieve the purpose and need, and allotment management objectives.

**Table 1 Purpose and Need and Proposed Action**

Pasture	Proposed Action	Purpose and Need	Objective
Luna Chacon Allotment	• Authorize 95-119 cow/calf units to continue grazing on the Luna portion of the Luna Chacon Allotment, utilizing a three-pasture rotational grazing system within	Livestock grazing on National Forest System lands has contributed to the local economy and the stability of	<u>Make forage availability to support domestic livestock and contribute to the</u>

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Pasture	Proposed Action	Purpose and Need	Objective
	<p>the season 6/1-9/30. The three pastures within the Luna portion are the Bull, Lower Luna, and Upper Luna Pastures.</p> <ul style="list-style-type: none"> <li>• Authorize 135-169 cow/calf units to continue grazing on the Chacon portion of the Luna Chacon Allotment, utilizing a three-pasture, rotational grazing system within the season 6/1-9/30. The three pastures within the Chacon portion are the La Presa, Romero Lake, and Sardinas Pastures.</li> <li>• Authorize 14 bulls to continue grazing on the Luna Chacon Allotment. Six of these bulls would typically run on the Luna portion and eight of them would run on the Chacon portion.</li> </ul>	<p>northern New Mexico communities for over a hundred years. On the Luna Chacon Allotment, there is a need for forage availability to support domestic livestock and contribute to the economic diversity and social well being of surrounding communities that depend on range resources for their livelihood.</p> <p>Capacity studies have determined that the Luna Chacon Allotment can support the proposed number of livestock and achieve desired conditions. Along with the 14 bulls, a realistic range of stocking is 95-119 c/c on the Luna portion and 135-169 on the Chacon portion to make adjustments for drought years.</p>	<p><u>economic diversity and social well being of surrounding communities that depend on range resources for their livelihood</u></p> <p><u>Maintain or improve range vegetation and soil conditions.</u></p>
<p>Olla Ranchos Allotment /Upper Luna Pasture of the Luna Chacon Allotment</p>	<p>Incorporate a 621 acre portion of the Olla Ranchos Allotment for livestock grazing use in the Upper Luna Pasture of the Luna Chacon Allotment. This area includes the upper portion of Frijoles Canyon. In conjunction with this, install drift fences (non-contiguous stretches of fence tied into natural features such as steep slopes) to manage livestock distribution. Discourage the current livestock trailing pattern along the creek by placing barriers (such as felled trees) along and across the stream channel and riparian area.</p> <p>Monitor cattle effects along the upper portion of Frijoles Creek and within the incorporated portion of the pasture. If monitoring indicates that more intensive control of livestock is needed, beyond what rest rotation, salting, and herding is achieving, reconstruct the boundary fence between the two areas (approximately 3-5 miles) and adjust cattle use in this area to a shorter period of time.</p>	<p>Livestock grazing is one of the multiple uses of National Forest System lands. It is Forest Service policy to make forage available where it is appropriate. The Olla Ranchos Allotment is currently vacant. The Upper Frijoles Canyon area lies adjacent to the Luna Chacon Allotment. The physical logistics of the Olla Ranchos Allotment as a whole are not conducive to resuming its use as an intact allotment or for other District or Forest permittees to utilize the Upper Frijoles portion. Allocating the use of the Upper Frijoles Canyon portion of the Olla Ranchos Allotment to the Luna Chacon Allotment without increasing livestock numbers would slightly lower the intensity of use in the remainder of the Luna Chacon Allotment.</p>	<p><u>Make forage availability to support domestic livestock and contribute to the economic diversity and social well being of surrounding communities that depend on range resources for their livelihood</u></p> <p><u>Maintain or improve range vegetation and soil conditions.</u></p> <p><u>Maintain or improve the health of the riparian community.</u></p>
<p>Upper Luna Pasture</p>	<p>1) Install a drinker away from the small drainage in Section 5 to maintain vegetative diversity, acceptable soil compaction levels, and better riparian function by concentrating the use away</p>	<p>1) There is an opportunity to reduce impacts to a small drainage in Section 5 by installing a drinker nearby to concentrate livestock grazing</p>	<p><u>Provide for more effective management of cattle.</u></p>

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Pasture	Proposed Action	Purpose and Need	Objective
	<p>from the drainage.</p> <p>2) Reconstruct approximately ¼ to ½ mile of the La Presa/Upper Luna Pasture boundary fence and install a cattle guard to manage livestock distribution.</p> <p>3) Install a four foot cattle guard, for passage by ATVs, on the road in section 33 where the gate is constantly left open. This would also help with livestock distribution.</p>	<p>use away from the drainage.</p> <p>2) The boundary fence between La Presa Pasture and Upper Luna Pasture is in poor condition to non-existent, which is contributing to cattle moving between the two pastures out of schedule.</p> <p>3) In section 33, there is a road which is commonly used by ATVs and where the gate is constantly left open. Installing a four foot cattle guard could alleviate this problem.</p>	
Lower Luna Pasture	<p>1) Construct a “rain catchment” water development (an apron with troughs) on the ridge between East Fork and West Fork Luna Creek to allow cattle to stay on the ridges where there is forage and minimize their need to travel down to the canyon bottoms to drink water.</p> <p>2) Adjust the timing of grazing in Lower Luna Pasture to reduce late summer destabilization of streambanks occurring from livestock trailing along the East Fork Luna Creek. This could involve scheduling a shorter period of time for moving the cattle home in the fall (i.e. one week late season grazing instead of two).</p>	<p>1) There is an opportunity to assist in achieving better livestock distribution by putting some water on the ridge between East Fork and West Fork Luna Creek. There is grass in the upland meadows in this area which the cattle use, but they currently have to travel down to the canyon bottoms to drink water.</p> <p>2) The upper half of the East Fork Luna Creek has some trailing impacts which may benefit by adjusting the grazing season in this area.</p>	<p><u>Provide for more effective management of cattle.</u></p> <p><u>Maintain or improve the health of the riparian community.</u></p>
Bull Pasture	<p>Develop two water sources in Bull Pasture.</p> <p>1) Repair/reconstruct an old spring development at the top of the pasture, including the spring head protection fence, which is currently in disrepair. This would protect the spring and the riparian vegetation surrounding the spring from excessive grazing and soil compaction.</p> <p>2) Construct a “rain catchment” water development in an area along Forest Road 76 at the head of Maria’s Canyon which has forage but not a nearby water source.</p>	<p>1) There is an old spring development at the top of the pasture which is currently in disrepair and is not working. In addition, it is not providing protection for the springhead and the associated vegetation.</p> <p>2) There is forage available along Forest Road 76 at the head of Maria’s Canyon, but there is no water nearby. Due to the lack of water, it is not readily usable by livestock.</p>	<p><u>Maintain or improve the health of the riparian community.</u></p> <p><u>Provide for more effective management of cattle.</u></p>
La Presa Pasture	<p>Construct a wildlife/cattle exclosure fence around the Arizona willow population in La Presa Pasture, about 1 mile above Little Korea, if necessary, to maintain a healthy, stable or expanding willow population. The overall health of the riparian community would be the indicator of when or if protection is needed.</p>	<p>Arizona willow has been identified as a sensitive plant species for the Southwestern Region. There is a small population of this plant growing within the La Presa Pasture. There is a need for a healthy, stable or expanding population of Arizona willow, which includes a range of age classes including young and</p>	<p><u>Maintain or improve the health of the riparian community.</u></p>

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Pasture	Proposed Action	Purpose and Need	Objective
Romero Lake Pasture	1) Minimize repeated early season grazing, which would provide periods of early season deferment to improve species composition, to reverse the downward trend in range condition in this pasture, and 2) Develop a spring to provide an additional water source to relieve pressure on vegetation in the vicinity of Romero Lake. In order to address concerns regarding the early use of Romero Lake Pasture each year, limit the early season use to two weeks, using the remaining capacity in the fall (ie. use two weeks in the spring and two weeks in the fall).	middle-aged plants There is a need for good range condition with a stable or upward trend in the Romero Lake Pasture.	<u>Maintain or improve range vegetation and soil conditions.</u>  <u>Provide for more effective management of cattle.</u>
Luna Chacon Allotment	Implement prescribed burning within approximately 607 acres at a low to moderate intensity using broadcast burning, with possible hand piling and burning. Of these 607 acres: grassland - 251 acres, aspen – 26 acres, and spruce fir – 331 acres. These areas all have slopes of less than 40% and are relatively open, having less than 60% canopy cover. The intent is to implement prescribed burns within meadows and openings, not within the densely forested areas. Timing of burns would occur during fall, summer or winter, with fall ignition being most likely. Riparian buffers would include 50’ around seeps, springs, wetlands, and intermittent streams; 100’ around perennial water.	There is a need on the allotment and across the landscape for grassland meadows and open-canopied forested areas to have a productive herbaceous understory to provide forage for both wildlife and livestock. It has been recognized that fire historically played an important role in maintaining the open areas of many southwestern forests.	<u>Maintain/enhance meadows and forested openings to maintain or improve productivity of the herbaceous vegetation and the overall fire regime<sup>1</sup>.</u>

**Existing Situation**

**Location** - The Luna Chacon Allotment is located approximately 11 miles east of Penasco on the eastern edge of the Camino Real Ranger District. The project area lies in Taos and Mora Counties within portions of Township 24 North, Range 15 East, Sections 32-35; Township 23 North, Range 15 East, Sections 1-12, 14-22, 28-32; Township 23 North, Range 14 East, Sections 12-14, 21-29, 31-36; Township 22 North, Range 14 East, Sections 1-6, 8-17, 19-23, 27, 28. New Mexico Principal Meridian. The six pastures that make up the allotment are located to the north of State Highway 518, northeast of the community of Tres Ritos. It can be accessed by State Highway 518, and Forest Roads 11, 76, and 722.

**Setting** –The Luna Chacon Allotment contains approximately 28,549 acres ranging in elevation from 8,500 – 12,000 feet. It is located in the Mora River and Rio Pueblo watersheds.

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<sup>1</sup> Fire Regime Condition Class is a classification of the amount current conditions have departed from those of historical reference conditions.

## Livestock Grazing Management for the Luna Chacon Allotment – Proposed Action

Prior to 1969, the Luna Allotment and the Chacon Allotment were administered as two separate allotments. In 1969, the two were administratively combined into one allotment. However, the actual livestock grazing management has continued to be operated separately on the two original units as the Luna portion and the Chacon portion.

Sheep grazed on part of what became the Luna Allotment prior to it becoming part of the Carson National Forest. Forest Service actual use records, starting in 1946, document that both allotments have been permitted as cattle and horse allotments within the 6/1 – 9/30 season of use since that time.

**Current Grazing Management** – Livestock management on the Luna Chacon Allotment is run as a loose association in that each individual has their own permit for the numbers of cow/calf units they stock. They have a true association permit for their bulls. It is a joint bull permit for 14 bulls to the Luna Chacon Livestock Grazing Association. Six of these bulls typically graze on the Luna portion of the allotment and eight typically graze on the Chacon portion of the allotment.

The Luna portion, which consists of Bull Pasture, Lower Luna Pasture, and Upper Luna Pasture, has 6 permittees with permits which total 119 c/c for the season of 6/1-9/30, utilizing 3 pastures under a rest rotation grazing system.

The Chacon portion, which consists of La Presa Pasture, Romero Lake Pasture, and Sardinias Pasture, has 9 permittees with permits which total 169 c/c for the season of 6/1-9/30, utilizing 3 pastures under an elevation-driven deferred rotation system (typically used in the same rotation order each year).

In 2002, during a severe drought year, the permittees stocked the allotment with a 20% reduced number of livestock (230 cow/calf units). They were able to meet upland grazing guidelines with those numbers under drought conditions.

### **Management Direction**

The Carson National Forest Plan (Forest Plan) identifies the National Forest System (NFS) lands within the Luna Chacon Allotment as suitable for domestic livestock grazing. The project proposal was designed to conform to Forest Plan direction, goals, and standards and guidelines, which are incorporated by reference. The allotment includes lands within Management Areas 1 - Spruce under 40% slopes, 3 - Mixed Conifer under 40% slopes, 5 - Mixed Conifer and Ponderosa Pine Over 40%, 6 - Aspen, 7 - Unsuitable Timber, 9 - High Elevation Grassland, 13 - Oak, and 14 - Riparian.

The original Carson National Forest Plan did not contain specific management direction for grazing in either the Forest-wide direction or in the Management Area direction. The plan was amended in 1996 to provide direction for grazing management within habitat for the northern goshawk and the Mexican spotted owl. Since that time, general grazing management direction for the rest of the Forest has been developed by the Forest Range staff based on the effects of conservative/moderate stocking on plant physiology in terms of maintaining or increasing plant vigor and productivity in the light of frequent and recurring drought conditions in the

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southwestern United States (Howery 1999, FSM R3-2209.13-2006-1). Conservative stocking rates, in turn, can provide a relatively reliable operation for the rancher. The current Carson NF range management guidance includes managing for:

- Utilization levels between 20% to 40% (dry weight) at the end of the growing season. Utilization of the annual available forage would not exceed 40%.
- 4 inches of stubble height of the annual available forage in the riparian areas after livestock grazing.
- Fair to good range condition
- Stable to upward rangeland trend. (Stable trend is when the upward or downward trend is not apparent)
- Satisfactory watershed/soil conditions

**Resource Condition** – Existing range condition for the Luna Chacon Allotment was determined by field visits and examination of district range analysis records, which includes Parker 3-step range analysis transects and paced transects.

The Parker 3-Step transects measure species composition; score vegetation rangeland condition and apparent rangeland trend; score soil condition and apparent soil trend; evaluate grass vigor; measure grass height, and record vegetation cover. Long term trend is obtained from the comparison of transects from the same location over a period of time.

In 2007 Historic Parker 3 step clusters and paced transect sites were revisited and revealed good to excellent vegetation condition with mostly stable trend, and good to excellent soil condition with stable or upward trend. Although the vegetation score calculated from species composition were all good or better, there were three sites with downward trend for vegetation; Chacon P1 and Luna P2 were due to forest encroachment, and Chacon C1 due to 29 of 100 observations of invasive classified species like Iris and Yarrow.

**Table 2. Range Vegetation and Soil Condition & Trend**

Cluster # (C) or Pace Transect # (P)	Vegetation Condition and Trend	Soil Condition and Trend
Chacon P1	82 Excellent ↓	80 Good →
Chacon P2	79 Good →	76 Good →
Chacon P4	78 Good ↑	65 Good ↑
Chacon P6	81 Excellent →	74 Good →
Chacon C1	73 Good ↓	88 Excellent →
Luna P1	86 Excellent →	91 Excellent →
Luna P2	64 Good ↓	82 Excellent →
Luna P3	76 Good →	62 Good →
Luna C1	84 Excellent →	75 Good ↑
Luna C2	82 Excellent →	79 Good →

**Table 3. Utilization Measurements by Pasture for the Past 5 Years**

Pasture	Utilization% 2003	Utilization% 2004	Utilization% 2005	Utilization% 2006	Utilization% 2007
Romero Lake	20-30%	40%	45%	20-30%	20-40%
Sardinas	40%	20-40%	10-20%	20-30%	20-40%
La Presa	20-30%	20-40%	25%	10-30%	20-40%
Lower Luna	40%	0-20%	30-40%	0-5%	20-40%
Upper Luna	20-40%	0-20%	30-40%	10-20%	20-30%
Bull	<10%	20-40%	0-10%	20-50%	5-10%

Ocular estimates made during end of year inspections, show that the pasture wide utilization has been within guidelines. Written comments from those same inspections occasionally highlight areas of higher use where the cattle concentrate and graze repeatedly after regrowth occurs.

### **Decision Framework**

The Camino Real District Ranger will issue a decision for the Luna Chacon allotment that will include a determination of the significance of the environmental effects and whether an environmental impact statement will be prepared. The decision will also include a determination of consistency with the Forest Plan, National Forest Management Act, National Environmental Policy Act, and applicable laws, regulations, and executive orders.

If the Camino Real District Ranger determines it is not necessary to prepare an environmental impact statement, the District Ranger will decide whether cattle grazing will be allowed to continue on the allotment as proposed or as outlined under another alternative, including the no grazing alternative. If any alternative other than “no grazing” is selected, the decision will identify the class of livestock, number of livestock permitted, typical grazing season, general type of grazing system, utilization levels (grazing intensity), residual cover thresholds (stubble heights), range facilities, implementation schedules, and what monitoring and evaluation will be done. All of these items would be included in a new Allotment Management Plan and the new term grazing permit, which would be issued as part of the implementation of the decision.

### **Public Involvement**

The proposed project was listed in the Carson National Forest Schedule of Proposed Actions from October 2007, to the present. This list is distributed to numerous individuals and can be accessed on the Carson National Forest website and the national Forest Service website. A detailed project proposal was provided to 164 individuals, groups and agency representatives for comment during scoping in May 2008. Eight responses were received. In addition, the Forest consulted with tribal contacts for 16 tribes. Three responses were received.

Using the comments from the public, other agencies, and tribes, an interdisciplinary team developed a list of issues to address.

## Issues

Comments received during the scoping period were examined for significant issues. The Forest Service separates the issues into two groups: significant issues and non-significant issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council for Environmental Quality (CEQ) NEPA regulations require the following delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)..."

Among the topics raised during scoping, the Forest Service identified the following significant issues:

Significant Issue #1: Rio Grande cutthroat trout may be negatively affected by livestock grazing in the vicinity of trout streams. Proposed grazing guidelines of 40% utilization, 4" stubble heights, following rotational grazing systems, and salting away from waters would help protect Rio Grande cutthroat trout. Effects to Rio Grande cutthroat trout will be the indicator of this effect.

Significant Issue #2: Riparian communities and water quality conditions may be negatively impacted by livestock grazing. Proposed grazing guidelines of 40% utilization, 4" stubble heights, following rotational grazing systems, and salting away from waters would help protect the riparian community and the water quality of adjacent streams. Effects to riparian communities will be the indicator of this effect.

Significant Issue #3: Livestock grazing activities could affect the Arizona willow population in La Presa Pasture. Proposed grazing guidelines of 40% utilization, 4" stubble heights, following rotational grazing systems, and salting away from waters would help protect the riparian community, of which Arizona willow is one component. Effects to riparian communities will be the indicator of this effect.

## ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This section describes and compares the alternatives considered for management of the Luna Chacon Allotment. This section presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker.

### Alternatives Eliminated from Detailed Study

#### ***Current Management:***

This alternative would authorize grazing as it is currently permitted. The annual operating instructions specify which portion of the allotment (Luna or Chacon) the permitted numbers for

each permit run on. Each portion is run separately, as two separate 3-pasture grazing systems, but with one bull association to the association.

The IDT discussed that while range conditions in most grassland areas are currently good, Romero Lake Pasture has a downward vegetation trend. Continuing current management would maintain this downward trend, which would not achieve the desired conditions on the allotment.

In open-forested areas which are in a downward trend due to small trees “encroaching” into previously grassy areas, grazing management alone would not change the downward trend. More intensive treatments, such as prescribed fire, would be needed to stabilize the trends in these areas.

Under current management, these concerns would not be addressed. For these reasons, the current management alternative was eliminated from detailed analysis.

***Combine both units together and manage as one herd using a 6 pasture rotation system:***

This was planned for in the late 1960’s-early 1970’s. The distances to move cattle made it very difficult for the permittees to implement. After being tried for a few years, it was considered practically infeasible, and the previous system of two separate 3-pasture rotation systems was reimplemented and has remained in effect since that time. Since range conditions are “good” on the allotment following 25+ years under the current rotational system, it is not considered necessary to implement a different system which is practically infeasible in order to maintain those conditions.

***Split into two separate allotments:***

This alternative would be an administrative split, separating the Luna portion into a Luna Allotment, and the Chacon portion into a Chacon Allotment. The permittees prefer to keep both portions together, since they already have an association bull permit for the two portions together. This provides the permittees more flexibility in adjusting numbers among the allotment permittees. This would not change conditions on the ground and so the IDT did not feel it was necessary in order to achieve desired conditions.

***Implement a true deferred rotation system on Chacon where the pastures aren’t used in the same order each year:***

Due to the physical logistics and access into the Chacon portion of the allotment, it is very difficult to enter the allotment in a different pasture than Romero Lake, which makes it difficult to implement a true deferred rotation system. In addition, the other two pastures, Sardinias and La Presa are at a higher elevation and not range ready as early as Romero Lake. Implementing a true deferred system would delay entry into the higher elevation pastures until approximately July 1st, which would be an economic impact on the permittees.

***Riparian restoration in Frijoles sedge meadows – headcut repair and create meanders (trencher?)***

The IDT discussed that the headcut in the sedge meadow is not directly tied to current livestock use. The headcut has been in existence for a long period and is not clearly affected by current management. It was discussed that more analysis is needed to determine what structures or

channel work would actually be beneficial and stabilizing to the meadows, in order to avoid doing something that might actually make the situation worse. Such a project could be done under another analysis in the future.

***Create an alternative to enhance Rio Grande cutthroat trout:***

The IDT determined that there is fish survey data for creeks in the allotment showing that the Rio Grande cutthroat trout (RGCT) populations are healthy. There are also habitat surveys and macroinvertebrate surveys. The biggest threats to the populations are currently from competition from and interbreeding with introduced fish species such as rainbow trout and brown trout. ATV use across streams and along dirt roads adjacent to the streams accelerates sediment entering the streams, which in turn degrades RGCT habitat. Cattle use at current levels has not been identified as a threat to the RGCT in this analysis area. Since exotic species of fish and travel management activities would be the primary target of a RGCT enhancement alternative in this analysis area, and since these activities are out of the scope of this project, analysis of such an alternative was eliminated from detailed study.

***Consider a deferred rotation system in the Luna portion using all of the pastures each year instead of the current rest rotation:***

In the Luna portion of the allotment, each pasture currently gets rested from livestock grazing every other year. The IDT noted that conditions are good after using this system for at least 25 years and it is not certain that deferred rotation would get the same results. The proposed action allows for some flexibility by proposing a 3 pasture rotational system, which technically could be either rest or deferred, if resource needs warrant trying it to achieve resource goals. For these reasons, the alternative was eliminated from detailed analysis.

***Rest Rotation system in Chacon portion:***

As discussed above, the logistics of the Chacon portion of the allotment make it difficult to try to enter into a different pasture than Romero Lake. Using only two pastures a year would probably also require a decrease in numbers grazed or in the season of use, which would require a fairly large decrease in permitted numbers, economically impacting the livestock grazing permittee. Since the IDT believes the desired improved conditions in Romero Lake Pasture would be attained by a combination of the proposed action (a range of livestock numbers and reducing early season use in this pasture) and anticipated control of trespass livestock (by virtue of a court order for the person who owned the trespassing cattle not to graze cattle there anymore as of February 2008), we did not feel it necessary to implement a cut in livestock numbers to implement a rest rotation system to achieve the same result. It was also discussed that a rest rotation system could actually put additional pressure on areas like Policarpio, Duran, and Sardinias Canyons, since the timing under a rest rotation system would involve a longer period of time in each of the two pastures that are used each year. The proposed action (utilize a 3 pasture rotation system) does allow for some flexibility in what type of rotation system is followed, which would allow a rest rotation system to be tried if resource conditions warrant.

***Reduce use in Policarpio Creek and monitor:***

The NMDGF suggested an alternative that would reduce use in Policarpio Creek by trailing away from the creek, salting away from areas leading to Policarpio, and assessing annually with fisheries specialists. The IDT discussed that this can be implemented under the proposed action. Policarpio Canyon is used to trail livestock to the Sardinias Pasture. It could be primarily

scheduled for use only during that trailing period by using the suggestions the NMDGF put forth. The effects of the No Action alternative will also analyze the effects of reduced (no) use in Policarpio Creek.

***20% reduction in permitted numbers:***

The NMDGF suggested an alternative that reduces permitted numbers by 20% to achieve conservative allowable use. This would respond to the recent apparent climatic trend. The IDT discussed that the proposed action has a range of numbers which incorporates a 20% reduction in order to achieve conservative allowable use and be responsive to variable climatic changes. For this reason it was removed from detailed analysis as a separate alternative.

***Fence out Arizona willow and use for long-term monitoring:***

Fencing the AZ willow is part of the proposed action, if it is determined that it is needed. Long term monitoring needs to be designed to be effective and meaningful. The IDT discussed that research level monitoring is generally out of the scope of the project.

## **Alternatives Considered in Detail**

***Alternative A – No Action/No Grazing***

Under the No Action/No Grazing Alternative, domestic livestock grazing would not be a permitted activity on the Luna Chacon Allotment. Existing term grazing permits would be cancelled. The current permittees would no longer maintain existing range improvements (fences, developed springs, cattle guards, and earthen dam stock tanks).

***Alternative B – Proposed Action***

This alternative would authorize continued livestock grazing on the Luna Chacon Allotment, with some modifications. Components of the proposed action are:

- Authorize 95-119 cow/calf units to continue grazing on the Luna portion of the Luna Chacon Allotment, utilizing a three-pasture rotational grazing system within the season 6/1-9/30. The three pastures within the Luna portion are the Bull, Lower Luna, and Upper Luna Pastures.
- Authorize 135-169 cow/calf units to continue grazing on the Chacon portion of the Luna Chacon Allotment, utilizing a three-pasture, rotational grazing system within the season 6/1-9/30. The three pastures within the Chacon portion are the La Presa, Romero Lake, and Sardinas Pastures.
- Authorize 14 bulls to continue grazing on the Luna Chacon Allotment. Six of these bulls would typically run on the Luna portion and eight of them would run on the Chacon portion.
- In Upper Luna Pasture: 1) Install a drinker away from the small drainage in Section 5 to maintain vegetative diversity, acceptable soil compaction levels, and better riparian function by concentrating the use away from the drainage. 2) Reconstruct approximately ¼ to ½ mile of the La Presa/Upper Luna Pasture boundary fence and install a cattle guard to manage livestock distribution. 3) Install a four foot cattle guard, for passage by ATVs, on the road in section 33 where the gate is constantly left open. This would also help with livestock distribution.
- Incorporate a 621 acre portion of the Olla Ranchos Allotment for livestock grazing use in the Upper Luna Pasture of the Luna Chacon Allotment. This area includes the upper portion of Frijoles Canyon. In conjunction with this, install drift fences (non-contiguous stretches of fence

ted into natural features such as steep slopes) to manage livestock distribution. Discourage the current livestock trailing pattern along the creek by placing barriers (such as felled trees) along and across the stream channel and riparian area in order to maintain vegetative diversity, acceptable soil compaction levels, and in some places better riparian function (properly functioning riparian-wetland areas filter sediments, stabilize streambanks and wetland boundaries, improve water quality, and provide diverse vegetative habitats).

Monitor cattle effects along the upper portion of Frijoles Creek and within the incorporated portion of the pasture. If monitoring indicates that more intensive control of livestock is needed, beyond what rest rotation, salting, and herding is achieving, reconstruct the boundary fence between the two areas (approximately 3-5 miles) and adjust cattle use in this area to a shorter period of time.

- In Lower Luna Pasture, construct a “rain catchment” water development (an apron with troughs) on the ridge between East Fork and West Fork Luna Creek to allow cattle to stay on the ridges where there is forage and minimize their need to travel down to the canyon bottoms to drink water.
- Adjust the timing of grazing in Lower Luna Pasture to reduce late summer destabilization of streambanks occurring from livestock trailing along the East Fork Luna Creek. This could involve scheduling a shorter period of time for moving the cattle home in the fall (i.e. one week late season grazing instead of two).
- Develop two water sources in Bull Pasture. 1) Repair/reconstruct an old spring development at the top of the pasture, including the spring head protection fence, which is currently in disrepair. This would protect the spring and the riparian vegetation surrounding the spring from excessive grazing and soil compaction. 2) Construct a “rain catchment” water development in an area along Forest Road 76 at the head of Maria’s Canyon which has forage but not a nearby water source.
- Construct a wildlife/cattle exclosure fence around the Arizona willow population in La Presa Pasture, about 1 mile above Little Korea, if necessary, to maintain a healthy, stable or expanding willow population. The overall health of the riparian community would be the indicator of when or if protection is needed.
- Within Romero Lake Pasture, 1) minimize repeated early season grazing, which would provide periods of early season deferment to improve species composition, to reverse the downward trend in range condition in this pasture, and 2) develop a spring to provide an additional water source to relieve pressure on vegetation in the vicinity of Romero Lake. In order to address concerns regarding the early use of Romero Lake Pasture each year, limit the early season use to two weeks, using the remaining capacity in the fall (ie. use two weeks in the spring and two weeks in the fall).
- Implement prescribed burning within approximately 607 acres of the allotment at a low to moderate intensity using broadcast burning, with possible hand piling and burning, to maintain/enhance meadows and forested openings to maintain or improve productivity of the herbaceous vegetation and the overall fire regime condition classes. This would include approximately 251 acres in the grassland vegetation type, 25.5 acres in the aspen vegetation type, and 331 acres in the spruce fir vegetation type. The areas considered for prescribed burning would be in and around open meadows; in grasslands; in forested areas where canopy openings are at least 40% or greater (canopy cover of 60% or less); aspen patches; and/or any other openings – man-made or natural. The intent is to implement prescribed burns within meadows and openings, not within the densely forested areas or to change forest stand structure. Timing

of burns would occur during fall, summer or winter with fall ignition being most likely. Riparian buffers would include 50' around seeps, springs, wetlands, and intermittent streams; 100' around perennial water.

### **Monitoring**

Implementation monitoring would include periodic inspections to ensure compliance with term grazing permit terms and conditions. For example, range readiness would be monitored before the grazing season begins, stubble heights may be measured during the grazing season and utilization would be monitored at the end of the season. Effectiveness monitoring would determine if grazing standards and guidelines, grazing prescriptions, and Allotment Management Plan practices are effective in accomplishing the planned objectives. For example, vegetation condition and trend would be monitored at approximately ten-year intervals. Conditions in the Upper Frijoles Canyon area would be monitored regularly to determine if proposed improvements are necessary and if so, when they would be installed under a cost-share arrangement with the permittees.

### ***Alternative C – Modified Proposed Action (Eliminate Olla Ranchos Add-on)***

This alternative would be very similar to the proposed action, with the exception of not incorporating 641 acres of the Olla Ranchos Allotment into the Upper Luna Pasture of the Luna Chacon Allotment. This alternative would authorize continued livestock grazing on the Luna Chacon Allotment, with some modifications. Components of the Modified Proposed Action alternative are:

- Authorize 95-119 cow/calf units to continue grazing on the Luna portion of the Luna Chacon Allotment, utilizing a three-pasture rotational grazing system within the season 6/1-9/30. The three pastures within the Luna portion are the Bull, Lower Luna, and Upper Luna Pastures.
- Authorize 135-169 cow/calf units to continue grazing on the Chacon portion of the Luna Chacon Allotment, utilizing a three-pasture, rotational grazing system within the season 6/1-9/30. The three pastures within the Chacon portion are the La Presa, Romero Lake, and Sardinas Pastures.
- Authorize 14 bulls to continue grazing on the Luna Chacon Allotment. Six of these bulls would typically run on the Luna portion and eight of them would run on the Chacon portion.
- Construct an approximately 3 to 5 mile long fence between the Upper Luna Pasture and the Upper Frijoles Canyon portion of the adjacent Olla Ranchos Allotment. (This creates the primary difference between Alternatives B and C.)
- In Upper Luna Pasture: 1) Install a drinker away from the small drainage in Section 5 to maintain vegetative diversity, acceptable soil compaction levels, and better riparian function by concentrating the use away from the drainage. 2) Reconstruct approximately ¼ to ½ mile of the La Presa/Upper Luna Pasture boundary fence and install a cattle guard to manage livestock distribution. 3) Install a four foot cattle guard, for passage by ATVs, on the road in section 33 where the gate is constantly left open. This would also help with livestock distribution.
- In Lower Luna Pasture, construct a “rain catchment” water development (an apron with troughs) on the ridge between East Fork and West Fork Luna Creek to allow cattle to stay on the ridges where there is forage and minimize their need to travel down to the canyon bottoms to drink water.
- Adjust the timing of grazing in Lower Luna Pasture to reduce late summer destabilization of streambanks occurring from livestock trailing along the East Fork Luna Creek. This could

involve scheduling a shorter period of time for moving the cattle home in the fall (i.e. one week late season grazing instead of two).

- Develop two water sources in Bull Pasture. 1) Repair/reconstruct an old spring development at the top of the pasture, including the spring head protection fence, which is currently in disrepair. This would protect the spring and the riparian vegetation surrounding the spring from excessive grazing and soil compaction. 2) Construct a “rain catchment” water development in an area along Forest Road 76 at the head of Maria’s Canyon which has forage but not a nearby water source.
- Construct a wildlife/cattle exclosure fence around the Arizona willow population in La Presa Pasture, about 1 mile above Little Korea, if necessary, to maintain a healthy, stable or expanding population. The overall health of the riparian community would be the indicator of when or if protection is needed.
- Within Romero Lake Pasture, 1) minimize repeated early season grazing, which would provide periods of early season deferment to improve species composition, to reverse the downward trend in range condition in this pasture, and 2) develop a spring to provide an additional water source to relieve pressure on vegetation in the vicinity of Romero Lake. In order to address concerns regarding the early use of Romero Lake Pasture each year, limit the early season use to two weeks, using the remaining capacity in the fall (ie. use two weeks in the spring and two weeks in the fall).
- Implement prescribed burning within approximately 607 acres of the allotment at a low to moderate intensity using broadcast burning, with possible hand piling and burning, to maintain/enhance meadows and forested openings to maintain or improve productivity of the herbaceous vegetation and the overall fire regime condition classes. This would include approximately 251 acres in the grassland vegetation type, 25.5 acres in the aspen vegetation type, and 331 acres in the spruce fir vegetation type. The areas considered for prescribed burning would have slopes of less than 40%, and be in and around open meadows; in grasslands; in forested areas where canopy openings are at least 40% or greater (canopy cover of 60% or less); aspen patches; and/or any other openings – man-made or natural. The intent is to implement prescribed burns within meadows and openings, not within the densely forested areas or to change forest stand structure. Timing of burns would occur during fall, summer or winter with fall ignition being most likely. Riparian buffers would include 50’ around seeps, springs, wetlands, and intermittent streams; 100’ around perennial water.

### **Monitoring**

Implementation monitoring would include periodic inspections to ensure compliance with term grazing permit terms and conditions. For example, range readiness would be monitored before the grazing season begins, stubble heights may be measured during the grazing season and utilization would be monitored at the end of the season. Effectiveness monitoring would determine if grazing standards and guidelines, grazing prescriptions, and Allotment Management Plan practices are effective in accomplishing the planned objectives. For example, vegetation condition and trend would be monitored at approximately ten-year intervals.

## Mitigation and Monitoring

### Mitigation Measures

To mitigate resource impacts, the following measures would be implemented under action alternatives. The mitigation measures included here are limited to those for which the Forest Service has authority. These mitigation measures have been used on previous projects and are considered to be effective in reducing environmental impacts. With full implementation of applicable Forest Plan standards and guidelines, project design criteria, and the prescribed mitigation measures, no potentially significant adverse environmental affects would be expected to occur.

**Soil, Water and Vegetation** – the objective is to safeguard water and soil resources under sustained forage production; manage sustained forage production and forage utilization by livestock while maintaining healthy ecosystems for all resource objectives. (Best Management Practices FSH 2509.22, Chapter 20, Range Management)

- Control livestock numbers and season of use (i.e. evaluate range readiness, assure only permitted livestock enter the allotment, monitor grazing utilization, assess soil and vegetation condition and trend).
- Control livestock distribution (i.e. salting, riding, existing fences and watering facilities).

**Heritage Resources** – the objective is to protect heritage resources (archaeological sites) from direct or indirect impacts caused by ground disturbing activities associated with the construction of range facilities.

- If any unrecorded sites are discovered during the course of project implementation, all project activities in the vicinity of the site(s) would cease and the District or Forest Archaeologist would be notified. Project would be modified or relocated to avoid impacts to cultural resource sites.

### Monitoring

Implementation monitoring would include periodic inspections to ensure compliance with term grazing permit terms and conditions. For example, range readiness would be monitored before the grazing season begins, stubble heights may be measured during the grazing season and utilization would be monitored at the end of the season. Effectiveness monitoring would determine if grazing standards and guidelines, grazing prescriptions, and Allotment Management Plan practices are effective in accomplishing the planned objectives. For example, vegetation condition and trend would be monitored at approximately ten-year intervals.

## Comparison of Alternatives

Table 4. Comparison of Alternatives

Item	Alternative A No Action/No Grazing	Alternative B Proposed Action	Alternative C Modified Proposed Action (Eliminate Olla Ranchos Add- on)
Permitted	None	95-119 cow/calf units on the Luna	95-119 cow/calf units on the

Livestock Grazing Management for the Luna Chacon Allotment – Proposed Action

Item	Alternative A No Action/No Grazing	Alternative B Proposed Action	Alternative C Modified Proposed Action (Eliminate Olla Ranchos Add- on)
Livestock		portion; 135-169 cow/calf units on the Chacon portion; 14 bull on the Luna Chacon Allotment	Luna portion; 135-169 cow/calf units on the Chacon portion; 14 bull on the Luna Chacon Allotment
Season of Use	None	6/1 – 9/30	6/1 – 9/30
Grazing Management	N/A	Three pasture rotational on the Luna portion; three pasture rotational on the Chacon portion	Three pasture rotational on the Luna portion; three pasture rotational on the Chacon portion
Addition of 621 acres from the Olla Ranchos Allotment to the Luna Chacon Allotment and associated activities	No/none	<p>Yes/ Incorporate a 621 acre portion of the Olla Ranchos Allotment for livestock grazing use in the Upper Luna Pasture of the Luna Chacon Allotment. This area includes the upper portion of Frijoles Canyon. In conjunction with this, install drift fences (non-contiguous stretches of fence tied into natural features such as steep slopes) to manage livestock distribution. Discourage the current livestock trailing pattern along the creek by placing barriers (such as felled trees) along and across the stream channel and riparian area in order to maintain vegetative diversity, acceptable soil compaction levels, and in some places better riparian function (properly functioning riparian-wetland areas filter sediments, stabilize streambanks and wetland boundaries, improve water quality, and provide diverse vegetative habitats).</p> <p>Monitor cattle effects along the upper portion of Frijoles Creek and within the incorporated portion of the pasture. If monitoring indicates that more intensive control of livestock is needed, beyond what rest rotation, salting, and herding is achieving, reconstruct the boundary fence between the two areas (approximately 3-5 miles) and adjust cattle use in this area to a shorter period of time.</p>	No/ Construct an approximately 3 to 5 mile long fence between the Upper Luna Pasture and the Upper Frijoles Canyon portion of the adjacent Olla Ranchos Allotment.
Improvements in Upper Luna Pasture	None	1) Install a drinker away from the small drainage in Section 5 to maintain vegetative diversity, acceptable soil compaction levels, and better riparian function by	1) Install a drinker away from the small drainage in Section 5 to maintain vegetative diversity, acceptable soil compaction levels, and better riparian

Livestock Grazing Management for the Luna Chacon Allotment – Proposed Action

Item	Alternative A No Action/No Grazing	Alternative B Proposed Action	Alternative C Modified Proposed Action (Eliminate Olla Ranchos Add- on)
		<p>concentrating the use away from the drainage.</p> <p>2) Reconstruct approximately ¼ to ½ mile of the La Presa/Upper Luna Pasture boundary fence and install a cattle guard to manage livestock distribution.</p> <p>3) Install a four foot cattle guard, for passage by ATVs, on the road in section 33 where the gate is constantly left open. This would also help with livestock distribution.</p>	<p>function by concentrating the use away from the drainage.</p> <p>2) Reconstruct approximately ¼ to ½ mile of the La Presa/Upper Luna Pasture boundary fence and install a cattle guard to manage livestock distribution.</p> <p>3) Install a four foot cattle guard, for passage by ATVs, on the road in section 33 where the gate is constantly left open. This would also help with livestock distribution.</p>
Improvements in Lower Luna Pasture		<p>1) Construct a “rain catchment” water development (an apron with troughs) on the ridge between East Fork and West Fork Luna Creek to allow cattle to stay on the ridges where there is forage and minimize their need to travel down to the canyon bottoms to drink water.</p> <p>2) Adjust the timing of grazing in Lower Luna Pasture to reduce late summer destabilization of streambanks occurring from livestock trailing along the East Fork Luna Creek. This could involve scheduling a shorter period of time for moving the cattle home in the fall (i.e. one week late season grazing instead of two).</p>	<p>1) Construct a “rain catchment” water development (an apron with troughs) on the ridge between East Fork and West Fork Luna Creek to allow cattle to stay on the ridges where there is forage and minimize their need to travel down to the canyon bottoms to drink water.</p> <p>2) Adjust the timing of grazing in Lower Luna Pasture to reduce late summer destabilization of streambanks occurring from livestock trailing along the East Fork Luna Creek. This could involve scheduling a shorter period of time for moving the cattle home in the fall (i.e. one week late season grazing instead of two).</p>
Improvements in Bull Pasture		<p>Develop two water sources in Bull Pasture. 1) Repair/reconstruct an old spring development at the top of the pasture, including the spring head protection fence, which is currently in disrepair. This would protect the spring and the riparian vegetation surrounding the spring from excessive grazing and soil compaction.</p> <p>2) Construct a “rain catchment” water development in an area along Forest Road 76 at the head of Maria’s Canyon which has forage but not a nearby water source.</p>	<p>Develop two water sources in Bull Pasture. 1) Repair/reconstruct an old spring development at the top of the pasture, including the spring head protection fence, which is currently in disrepair. This would protect the spring and the riparian vegetation surrounding the spring from excessive grazing and soil compaction.</p> <p>2) Construct a “rain catchment” water development in an area along Forest Road 76 at the head of Maria’s Canyon which has forage but not a nearby water source.</p>
Improvements in La Presa Pasture		Construct a wildlife/cattle exclosure fence around the Arizona	Construct a wildlife/cattle exclosure fence around the

Livestock Grazing Management for the Luna Chacon Allotment – Proposed Action

Item	Alternative A No Action/No Grazing	Alternative B Proposed Action	Alternative C Modified Proposed Action (Eliminate Olla Ranchos Add- on)
		willow population in La Presa Pasture, about 1 mile above Little Korea, if necessary, to maintain a healthy, stable or expanding willow population. The overall health of the riparian community would be the indicator of when or if protection is needed.	Arizona willow population in La Presa Pasture, about 1 mile above Little Korea, if necessary, to maintain a healthy, stable or expanding willow population. The overall health of the riparian community would be the indicator of when or if protection is needed.
Improvements in Romero Lake Pasture		1) Minimize repeated early season grazing, which would provide periods of early season deferment to improve species composition, to reverse the downward trend in range condition in this pasture, and 2) Develop a spring to provide an additional water source to relieve pressure on vegetation in the vicinity of Romero Lake. In order to address concerns regarding the early use of Romero Lake Pasture each year, limit the early season use to two weeks, using the remaining capacity in the fall (ie. use two weeks in the spring and two weeks in the fall).	1) Minimize repeated early season grazing, which would provide periods of early season deferment to improve species composition, to reverse the downward trend in range condition in this pasture, and 2) Develop a spring to provide an additional water source to relieve pressure on vegetation in the vicinity of Romero Lake. In order to address concerns regarding the early use of Romero Lake Pasture each year, limit the early season use to two weeks, using the remaining capacity in the fall (ie. use two weeks in the spring and two weeks in the fall).
Prescribed burning in Luna Chacon Allotment	None	Implement prescribed burning within approximately 607 acres at a low to moderate intensity using broadcast burning, with possible hand piling and burning. Of these 607 acres: grassland - 251 acres, aspen – 26 acres, and spruce fir – 331 acres. These areas all have slopes of less than 40% and are relatively open, having less than 60% canopy cover. The intent is to implement prescribed burns within meadows and openings, not within the densely forested areas. Timing of burns would occur during fall, summer or winter, with fall ignition being most likely. Riparian buffers would include 50' around seeps, springs, wetlands, and intermittent streams; 100' around perennial water.	Implement prescribed burning within approximately 607 acres at a low to moderate intensity using broadcast burning, with possible hand piling and burning. Of these 607 acres: grassland - 251 acres, aspen – 26 acres, and spruce fir – 331 acres. These areas all have slopes of less than 40% and are relatively open, having less than 60% canopy cover. The intent is to implement prescribed burns within meadows and openings, not within the densely forested areas. Timing of burns would occur during fall, summer or winter, with fall ignition being most likely. Riparian buffers would include 50' around seeps, springs, wetlands, and intermittent streams; 100' around perennial water.

Figure 1. General Location Map for the Luna Chacon Allotment

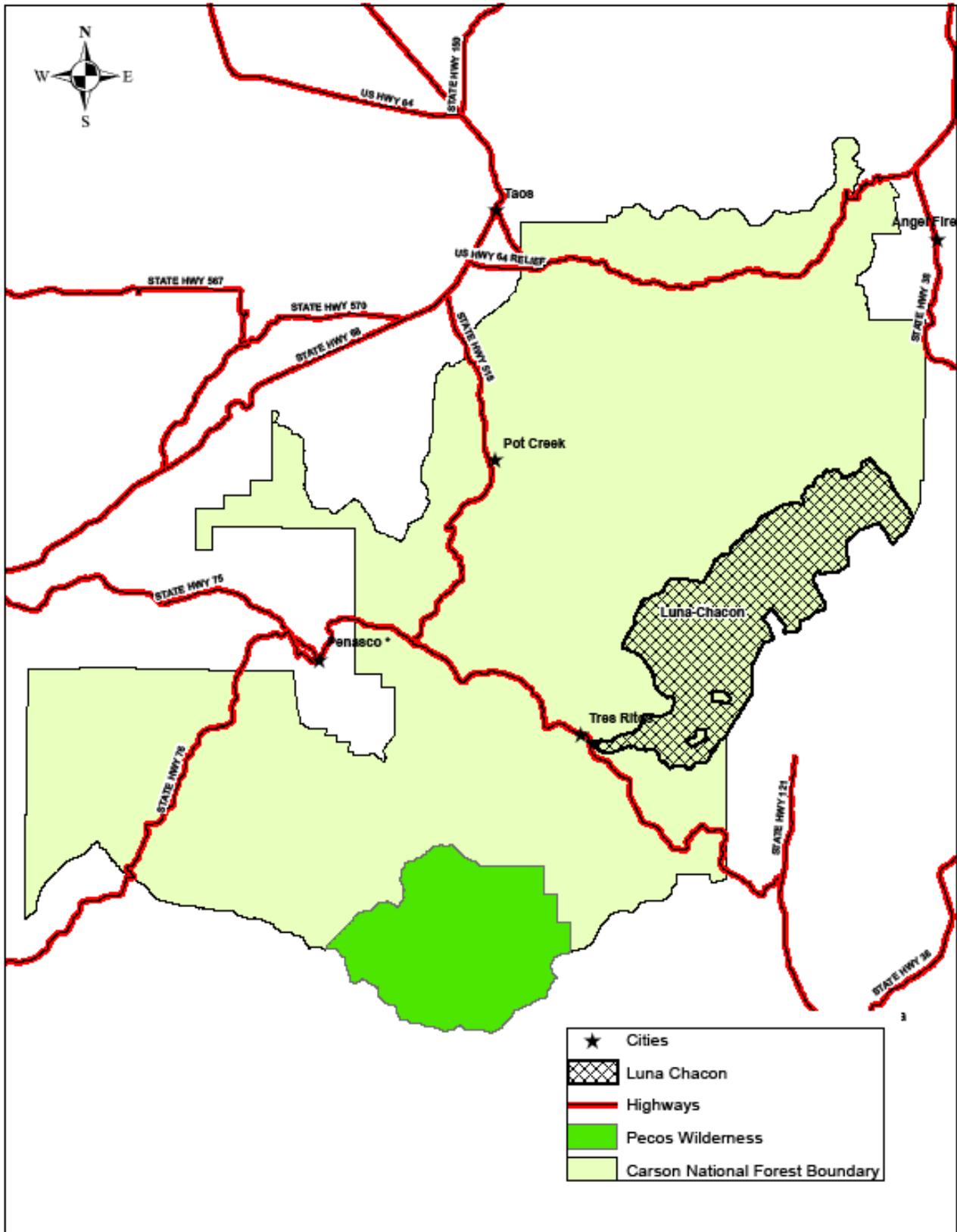


Figure 2. Map of Luna Chacon Allotment Boundary and Pastures

