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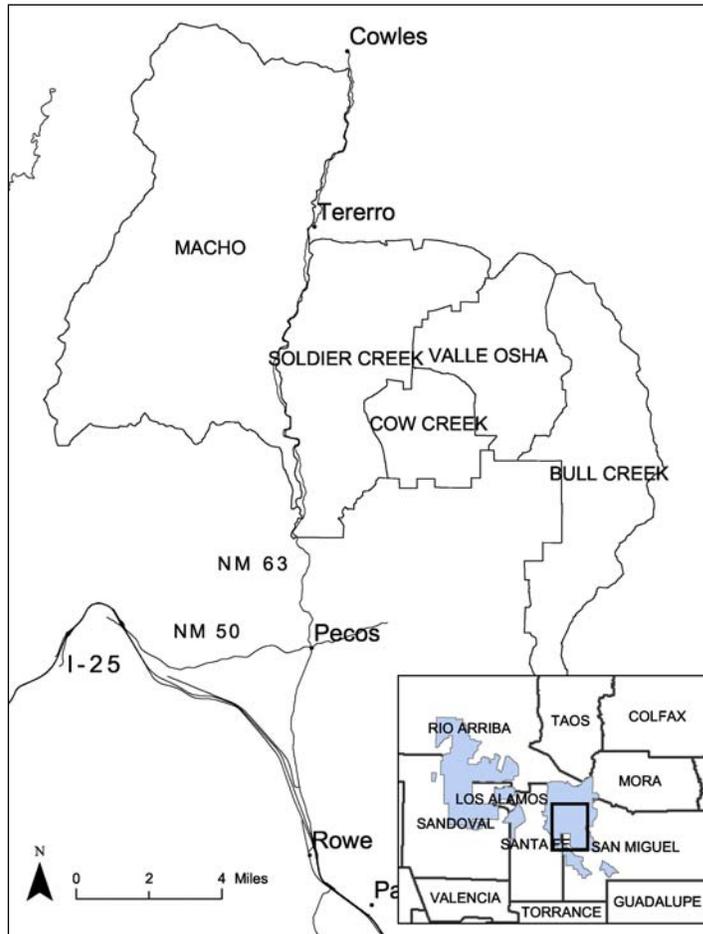
Forest  
Service

Southwestern  
Region



# Chapters 1 and 2 for Five Range Allotments

## Santa Fe National Forest





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# Chapter 1 – Purpose and Need

## Purpose and Need for Action

The purpose of this project is to reissue grazing permits in compliance with the National Environmental Policy Act and Section 504 of the 1995 Rescissions Act on five allotments located on the Pecos/Las Vegas Ranger District of the Santa Fe National Forest. In doing so, the Forest Service would authorize grazing and develop Allotment Management Plans (AMPs) for the Bull Creek, Cow Creek, Macho, Solider Creek, and Valle Osha Allotments. The AMPs would incorporate grazing strategies and allow construction of range facilities to refine the existing grazing management system.

The purpose of refining the existing grazing system on all five allotments is to:

- Maintain or promote the vigor of riparian plants such as willow, alder, sedge, and rushes;
- Maintain or promote the vigor of native grasses and shrubs; and
- Have range facilities in place that would help permittees better manage their cattle.

In order to achieve these purposes, there is a need for:

- Infrastructure to enforce rotational grazing strategies on the Bull Creek, Cow Creek, Macho, and Valle Osha Allotments;
- Dependable water in pastures comprising each allotment;
- Controlled use of riparian areas by livestock;
- Controlled use of upland pastures by livestock;
- Physical separation of the Valle Osha and Cow Creek Allotments;
- More use of the Ruidoso pasture, which is an entry pasture, on the Bull Creek Allotment;
- A formal grazing strategy in the Cow Creek Allotment; and
- A functional corral in the Bull Creek Allotment.

## Existing Condition

The five allotments encompass approximately 83,100 acres, of which about 10,000 acres is private property. Of the approximate 73,100 acres on National Forest System lands, about 21% (15,200 acres) is considered “capable” range. Combined, the existing grazing permits authorize a total of 152 cattle to graze. The current grazing management system for each allotment is detailed in Table 1. The current grazing strategies on the allotments are informal, deferred rotations that use natural barriers, herding, salting, and existing developments to manage livestock.

**Table 1. Current Grazing Management System by Allotment**

	<b>Bull Creek</b>	<b>Cow Creek</b>	<b>Macho</b>	<b>Soldier Creek</b>	<b>Valle Osha</b>
Total Acres	14,536	5,182	38,582	15,888	8,957
Acres on National Forest land	13,353	4,399	36,648	10,084	8,644
Total Grazed Acres (approximate)	2,202	1,408	6,754	3,469	1,388
Pastures	1. Valle 2. Quemazon	1. Tijeras	1. Macho		1. Valle Osha
Grazing System	Two pasture informal rotation	Single unit, no rotation	Single unit, no rotation		Single unit, no rotation
Facilities -Spring developments  -Corrals  -Fences	1 spring  2 corrals (one is abandoned) 7.7 miles	   2 miles	3 springs with some work 1 corral  1 mile		3 springs   10.4 miles
Dates	5/16-10/15	5/16-10/15	5/16-10/15	7/01-10/31	6/01-9/30
Animal Use Months (AUM)	240	55	80	0	308
Number of Cattle	48	11	16	0	77

Based on inspections and monitoring conducted, less than one percent of the total grazed acres on these five allotments is in “unsatisfactory range management status”. This term describes the situation where the existing vegetation is not desired and where short-term objectives are not being achieved.

Rangeland is considered to be in “satisfactory range management status” when the existing vegetation is similar to the desired condition or the short-term objectives are being achieved to move the rangeland toward the desired condition. The existing condition of each allotment is described below.

#### *Bull Creek*

Approximately 300 acres of the Bull Creek Allotment are classified as being in unsatisfactory range management status. On these acres, increasing densities of cinquefoil and Kentucky bluegrass are gradually displacing the desired species of Arizona fescue and mountain muhly.

Uneven distribution of cattle contributes to lower vigor and composition of desired plants. For instance, cattle enter the allotment from Lower Colonias and Bull Creek then travel north quickly, concentrating in northern pastures rather than spending the allotted time in the Ruidoso pasture.

The uneven distribution of cattle is partially caused by a lack of range facilities. In the Valle Toro pasture, cattle drift onto FR (Forest System Road) 86 and private property. Penning cattle is difficult because there is no wing fence to help herd the cattle towards the Bull Creek corral, and the corral is in poor condition. The base of the corral is not level, and trees surrounding it make it difficult to herd cattle inside or back a trailer up to the corral. The second corral on the allotment has been completely abandoned.

#### *Cow Creek*

Very few acres of the Cow Creek Allotment are considered to be in unsatisfactory range management status. The Viveash fire burned part of this allotment, creating an abundance of feed. Over time, however, the lack of a grazing strategy could cause a shift towards less desirable plant communities, such as cinquefoil and Kentucky bluegrass.

#### *Macho*

About 50 acres of the Macho Allotment are classified as being in unsatisfactory range management status, where increasing densities of Kentucky bluegrass and iris are gradually displacing desired species such as pine dropseed and mountain muhly. On these acres, uneven distribution of cattle contributes to lower vigor and composition of desired plants. The uneven distribution of cattle can partially be attributed to a lack of range facilities; for instance, there is no dependable water on the Dalton, Carpenter, or Indian Creek pastures. The gate on FR 123 is sometimes left open, allowing cattle to travel to the lower Dalton pasture.

#### *Soldier Creek*

Very few acres of the Soldier Creek Allotment are considered to be in unsatisfactory range management status because no authorized cattle grazing have occurred on the allotment for approximately ten years.

#### *Valle Osha*

Very few acres of the Valle Osha Allotment are considered to be in unsatisfactory range management status. Nonetheless, there are no range facilities to prevent cattle from congregating in the riparian area around Osha Creek; because there is no dependable water upland, cattle move into the riparian area instead of grazing in the Ojitos and Valle Osha pastures. Cattle also drift between the Osha and Cow Creek Allotments because the fence that used to separate the allotments was destroyed in the Viveash fire. The Viveash fire burned part of this allotment, creating an abundance of feed. If left unchecked over time, however, improper distribution of cattle could cause a shift towards less desirable plant communities, such as cinquefoil and Kentucky bluegrass.

## Desired Future Condition

### *Bull Creek*

The entire allotment would be in satisfactory range management status. Over time plants such as Arizona fescue and mountain muhly would be the dominant plant species. As is the case now, very little exposed and compacted soil would exist since cattle would be evenly distributed. Riparian areas would have an abundance of willows, sedges, alder, and rushes. The distribution of cattle on the allotment would be improved because they would spend more time in the Ruidoso pasture.

### *Cow Creek*

Range plants would be used evenly because a formal deferred rotation grazing strategy would be in place; over time, the grasses reinvigorated by the Viveash fire would be preserved. Soils would not be compacted or exposed because cattle would not congregate in one or two areas, but be evenly distributed across the allotment. Over time, the existing vegetation would continue to thrive and invasive species would be less likely to establish themselves.

### *Macho*

The entire allotment would be in satisfactory range management status. Plants such as pine dropseed and mountain muhly would continue to be the dominant plant species. Very little exposed and compacted soil would exist since cattle would be evenly distributed by having dependable water in the upland pastures. Riparian areas where cattle graze would have an abundance of plants such as willows, sedges, alder, and rushes. The distribution of cattle on the allotment would be improved, facilitating growth of desired plant species, because a formal deferred rotation grazing strategy would be in place.

### *Soldier Creek*

Over time, the existing, desired vegetation would continue to thrive and no invasive species would establish themselves. Riparian areas would continue to have vigorous willows, alder, rushes, and sedges because use of them would be infrequent and closely controlled. Soils would not be compacted or exposed because cattle would not be on the allotment annually.

### *Valle Osha*

Over time, the existing vegetation would continue to thrive and no invasive species would establish themselves. Riparian areas would continue to have vigorous willows, alder, rushes, and sedges because use of them would be closely controlled. Soils would not be compacted or exposed because cattle would be evenly distributed across the allotment. Range plants would be more evenly used because cattle would remain in their assigned allotments and have dependable water in upland pastures. Over time, the grasses reinvigorated by the Viveash fire would be preserved.

## Proposed Action

Table 2 summarizes the proposed grazing strategy for each allotment, and is followed by specific management prescriptions for each allotment. Since these actions are closely related with respect to timing and geography, they are considered similar actions (40 CFR 1508.25 (a)(3)). No additional acres are proposed for grazing. The maximum and minimum grazing season is determined from range monitoring of the specific allotment. A late entry onto an allotment would be caused by a lack of grass due to climatic conditions, such as drought. An early removal from an allotment would be based on factors such as early snowfall or cold temperatures.

Range facilities would be paid for on a 50:50 cost share basis, meaning that the Forest Service would provide materials and the permittee would provide labor.

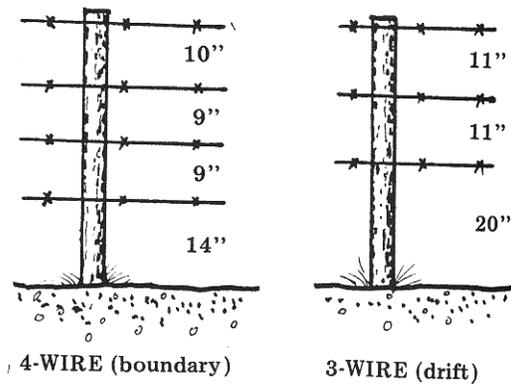
**Table 2. Proposed Grazing Management**

	<b>Bull Creek</b>	<b>Cow Creek</b>	<b>Macho</b>	<b>Soldier Creek</b>	<b>Valle Osha</b>
Total Acres	14,536	5,182	38,582	15,888	8,957
Total Grazed Acres (approx)	2,202	1,408	6,754	3,469	1,388
Pastures	1. Valle Toro 2. North 3. Quemazon 4. Bull (holding) 5. Ruidoso	1. Chaperito 2. Tijeras	1. Dalton 2. Indian Creek 3. Carpenter	1. North 2. South	1. Valle Osha 2. Manzanares 3. Osha 4. Ojitos
Grazing System	Four pasture deferred rotation	Two pasture deferred rotation	Three pasture deferred rotation	Occasional use	Four pasture deferred rotation
New facilities -Spring developments -Corrals -Fences -Cattle guards	1 corral .75 miles		1 spring 1 well  .5 miles 1 cattle guard		1 spring repair  1.75 miles 2 cattle guards
Total facilities -Spring developments -Corrals -Fences -Cattle guards	1 spring  3 corrals 8.5 miles	2 miles	3 springs with some work 1 developed spring 1 well 1 corral 1.75 miles 1 cattle guard		3 springs  10.7 miles 2 cattle guards
Maximum Grazing Season	5/16-10/15	5/16-10/15	5/16-10/15	6/01-10/31	6/1-9/30
Minimum Grazing Season	6/1-9/30	6/1-9/30	6/1-9/30	7/1-9/30	6/1-9/30
Max/ Min AUM (1 cow-calf pair for 1 month)	316/240	73/55	106/80	330/200	407/308
Number of Cattle	48	11	16	50	77

*Bull Creek*

The Forest Service proposes to install two short drift fences (T16N, R14E, Sec. 13 and 15), approximately one-quarter mile long, in order to slow the movement of cattle between the Ruidoso and Quemazon pastures. Figure 1 shows an example of the type of fencing to be constructed. The Forest Service would construct about one-quarter mile of wing fence (T16N, R13E, Sec. 26) from the east side of FDR86 to the corner of private land to assist in herding cattle towards the corral. Finally, the Forest Service would relocate the Bull Creek corral (T17N, R12E, Sec. 26) about 200 yards from its current location to make it usable. To do so, about ¼ acre of ground around the new corral would be leveled. The new location facilitates easy turning and parking. Figure 2 shows the locations of proposed range facilities on the Bull Creek Allotment.

**Figure 1. Example of Standard Fencing for Cattle**



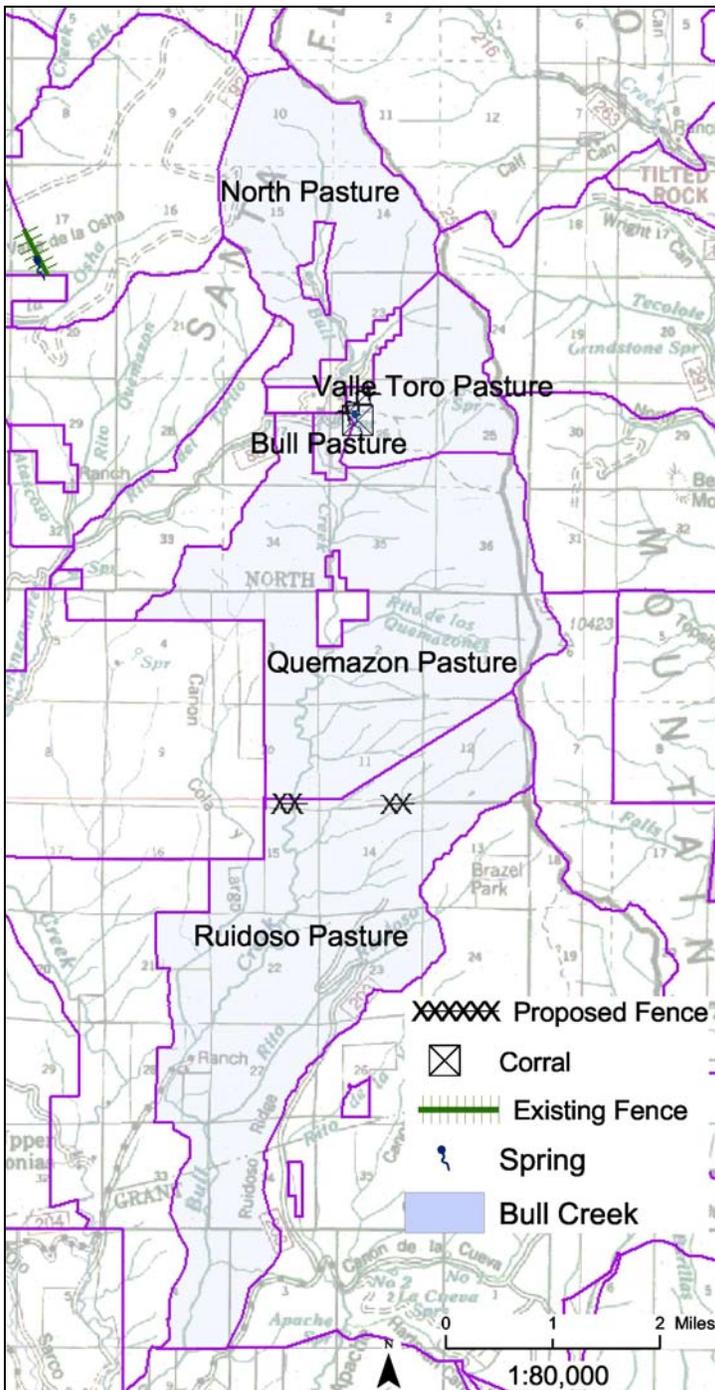


Figure 2. Proposed Action-Bull Creek (existing and proposed facilities)

*Cow Creek*

The Forest Service would implement a two-pasture, deferred rotation strategy in the Cow Creek Allotment to maintain the distribution and composition of range plants (Figure 3). The two pastures would be Chaperito and Tijeras.

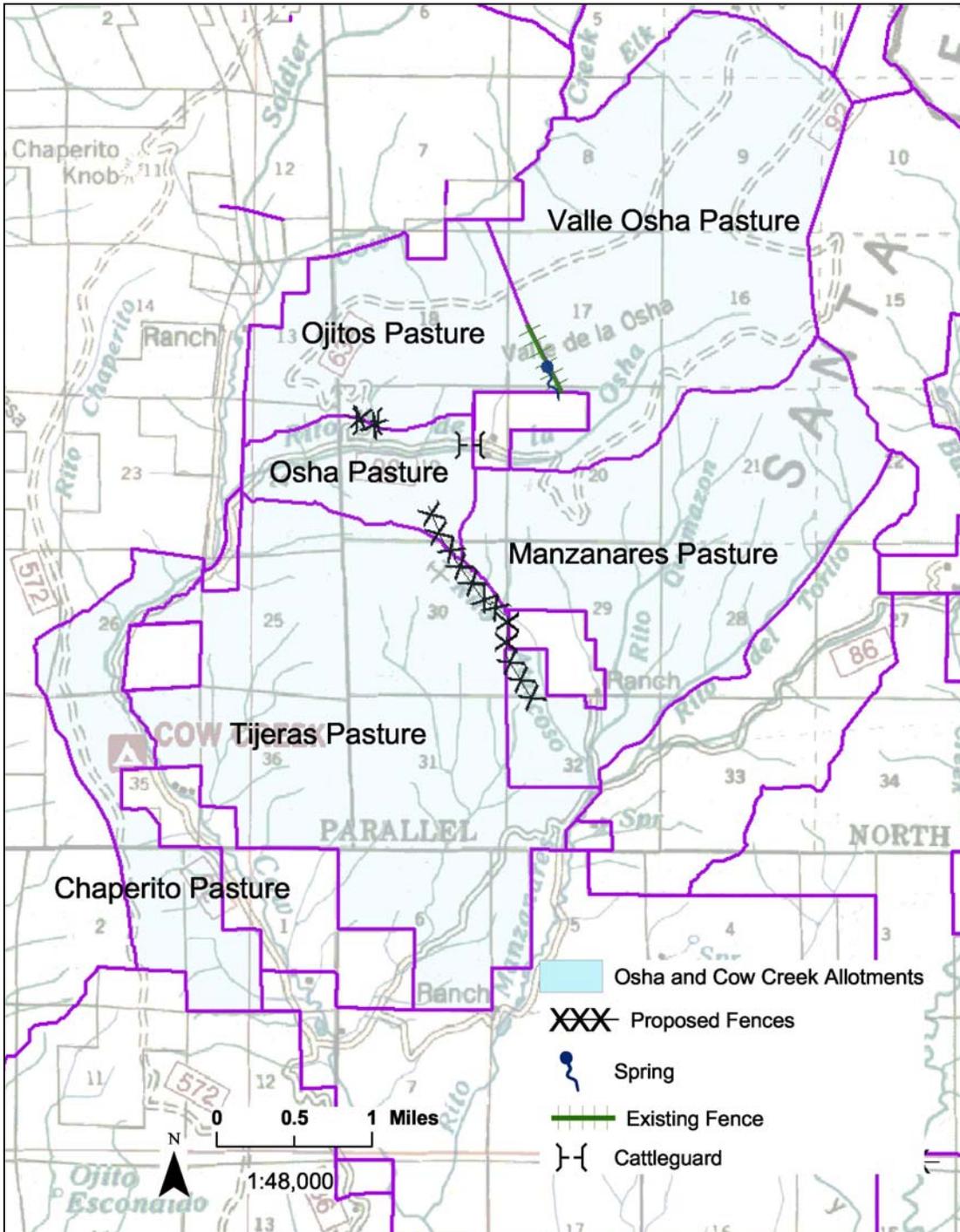
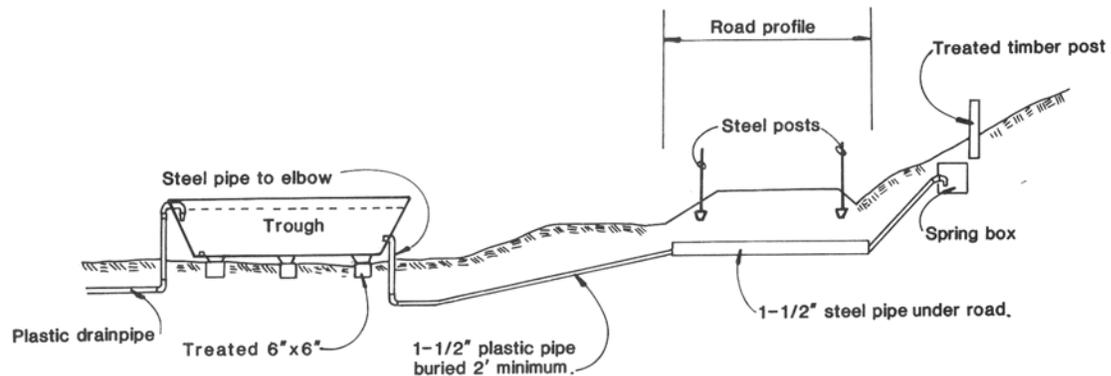


Figure 3. Proposed Action-Cow Creek and Osha (existing and proposed facilities)

*Macho*

On the Macho Allotment (Figure 5), the Forest Service would develop one spring with enclosure, pipeline, and drinker (see Figure 4) in the Dalton pasture (T17N, R11E, Sec. 24) and a well in the Indian Creek pasture (T18N, R12E, Sec. 31) to provide dependable water in the upland pastures. To manage the movement of cattle into the lower Dalton pasture, the Forest Service would install a cattle guard on FR 123 and constructing approximately one-quarter mile of fence (T17N, R12E, Sec. 30). Figure 6 depicts a typical cattle guard. Last, the Carpenter Ridge pasture, a portion (about 8,300 acres) of which lies in the Pecos Wilderness, would be formally included in the grazing rotation, approximately twice every ten years. Though this pasture is part of the current grazing management, cattle do not frequent it.

**Figure 4. Example of a Spring Development**

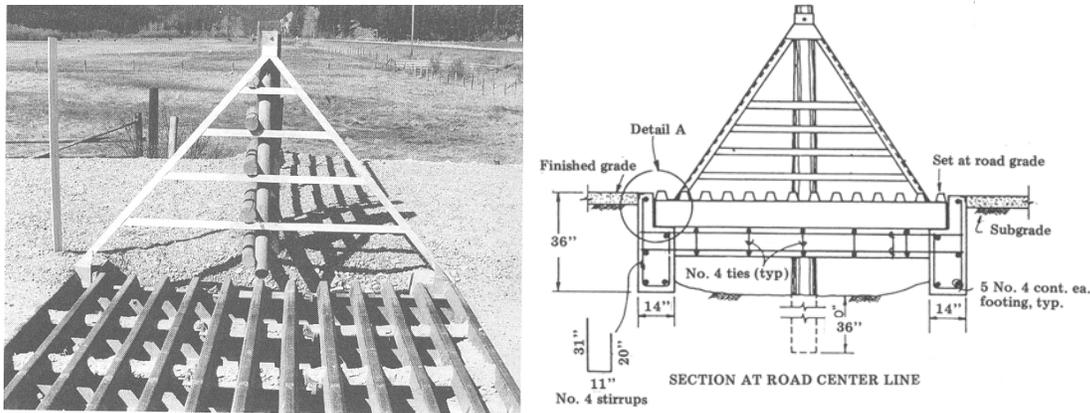




### *Valle Osha*

On the Valle Osha Allotment (Figure 3), the Forest Service would install two cattle guards (see Figure 6) on FDR 92 and build about one-quarter mile of fence (T17N, R13E, Sec. 19) to create a pasture along Osha Creek. This would enable the Forest Service and permittees to control use of the riparian area. Approximately one and a half miles of division fence separating the Valle Osha and Cow Creek Allotments would be re-built (T17N, R13E, Sec. 30, 31, and 32) to keep cattle properly distributed in their respective allotments. The Forest Service would relocate the southern edge of the fence between the Ojitos and Valle Osha pastures and repair the spring (T17N, R13E, Sec. 17) so water is shared between the two pastures.

**Figure 6. Example of Typical Cattle Guard and Foundation**



## Decision Framework

The District Ranger of the Pecos/Las Vegas Ranger District will determine whether the environmental effects of the proposed action are significant and whether an environmental impact statement will be prepared. The decision will determine consistency with the Forest Plan, National Forest Management Act, National Environmental Policy Act, and applicable laws, regulations, and executive orders.

If the District Ranger determines an environmental impact statement is not necessary, (s)he will decide whether livestock grazing should be authorized on all, part, or none of the allotments. If grazing will be authorized, the District Ranger will decide which management prescriptions are needed to ensure desired conditions are achieved in an acceptable timeframe.

## **Public Involvement**

The Forest Service met with its permittees in December 2003. We sent a scoping letter to tribes, pueblos, and 125 individuals and organizations on March 25, 2004. We received five written responses to our letter.

## **Key Issues**

Key issues are concerns or debate about the potential effects of a proposed action. The Interdisciplinary Team (ID Team) met on May 6, 2004 to analyze the comments received during scoping and to determine if any key issues were raised. No key issues were identified (see project record).

## **Issues Eliminated from Detailed Study**

At the meeting on May 6, 2004, the ID Team determined that some concerns were addressed by the proposed action (including mitigations), outside the scope of the proposal, conjectural, irrelevant to the decision, not supported by scientific evidence, or already decided by law, regulation, or policy. The issues raised during scoping and eliminated from analysis are found in the project record.

## **Project Record Availability**

Additional documentation is in the project record located at the Pecos Ranger Station of the Santa Fe National Forest (18 State Route 63, Pecos, New Mexico). The project record is available for the public's review from 8:00 am to 4:30 pm. Please contact Julie True at (505) 757-6121 for more information.

# Chapter 2 - Alternatives

This chapter describes and compares the alternatives considered for the five range allotments. It also 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 and the public.

## Alternatives Eliminated from Detailed Study

After preliminary analysis, the ID Team eliminated three alternatives, briefly summarized below, from detailed study. These alternatives did not meet the purpose and need.

### Remove Carpenter Ridge pasture from Macho Allotment

This alternative would be essentially the same as the proposed action with one change; the Carpenter Ridge pasture would not be grazed due to the proximity of the pasture to areas having high recreational use. This alternative was dropped from further analysis because this pasture is needed as part of the rotation for the Macho Allotment.

### Combine Solider Creek and Rosilla Allotments

This alternative is essentially the same as the proposed action except Solider Creek would not be kept as a swing allotment. Instead, it would be absorbed into the Rosilla Allotment. This alternative was dropped from further analysis because the Solider Creek Allotment needs to be available to the entire district in order to rest pastures in any allotment, not just in the Rosilla Allotment.

### Remove Dalton pasture from Macho Allotment

This alternative would eliminate grazing in the lower Dalton pasture. This alternative was eliminated from further study because the lower pasture is needed as part of the rotation of the Macho Allotment.

## Alternatives

### Alternative 1 (No Change)

There would be no change from the current management of the allotments. The Forest Plan and respective allotment management plans would continue to guide grazing on the allotments. None of the proposed actions would be implemented. Details of this alternative are presented in Table 1 (Current Grazing Management).

### Alternative 2 (No Grazing)

Cattle grazing would no longer be allowed on these allotments. Permittees would be required to remove all cattle from the allotment when their current grazing permit expires (Table 3). No new permits would be issued. All range facilities would revert to the Forest Service and be evaluated for their value as protection to soil, wildlife, and watersheds. Allotment boundary fences would not be removed as they would be needed to prevent excess use from cattle on neighboring allotments.

**Table 3. Grazing Permit Expiration Dates**

Allotment Name	Grazing Permit Expiration Date
Bull Creek	12/31/2005
Bull Creek	12/31/2006
Bull Creek	12/31/2012
Cow Creek	12/31/2006
Macho	12/31/2010
Valle Osha	12/31/2010

### Alternative 3 (Proposed Action)

Grazing would continue on the five allotments with changes incorporated to address needs identified in Chapter 1 (Purpose and Need and Proposed Action). Figures 2, 3, and 5 display proposed range facilities. Table 2 displays the proposed grazing management strategy.

### Mitigation Measures Common to All Alternatives

The mitigation and monitoring measures contained in this section are common to all action alternatives unless otherwise noted. Mitigation measures are prescribed to avoid, minimize, or compensate for adverse environmental effects that could occur from implementing the project. The mitigation measures included here are limited to those for which the Forest Service has authority. These mitigation measures have been used on other projects and are considered to be effective. Monitoring determines whether the project was implemented as planned. Monitoring activities are indicated by an arrow (➤).

**Soil and Water Quality** – The objective is to prevent soil from being exposed, eroding, and delivering sediment to streams as a result of cattle grazing and range facility construction.

- Cattle will not be moved onto an allotment or pasture until range readiness and facilities inspections indicate that appropriate conditions exist. This will ensure that forage will be maintained at or above a condition that assures recovery (Forest Plan, Appendix D, p. 10).
- Cattle will be moved when utilization of key forage species in key use areas approaches established standards (conservative levels<sup>1</sup>).

<sup>1</sup> Forest Service Manual direction for the Southwest Region require management at conservative levels (FSM 2111.1 (R3). Holecheck and Galt (2000) define five levels of use: Light to unused (0-30%), conservatively used (31-40%), moderately used (41-50%), heavily used (51-60%), and severely used (61%+).

- A salting plan will be developed that minimizes impacts to riparian zones, meadow ecosystems, and other forest resources (Forest Plan, p. 68). Salting locations will vary annually and will not be located within ¼ -mile of water sources.
- Implementation monitoring will include periodic inspections to ensure compliance with permit terms and conditions.
- Effectiveness monitoring will determine if grazing standards and guidelines, grazing prescriptions, and Allotment Management Plan practices are effective in accomplishing the planned objectives. This will occur during annual meetings with permittees.
- Range readiness will be monitored before the grazing season begins to ensure that range conditions appropriate for cattle exist.
- Stubble heights will be measured, at a minimum, at the midpoint of the grazing season to ensure that utilization of forage is within established standards.
- Validation monitoring will compare records of actual use and effectiveness monitoring to determine if the stocking rates are appropriate.
- The condition and trend of vegetation will be measured at five-year intervals to ensure long-term recovery of forage.

**Wildlife, Fish and Plants-** The objective is to mitigate impacts to wildlife from continued cattle grazing and from disturbance associated with the location and construction of range facilities.

- If any proposed, Threatened, Endangered plant or animal species are discovered during construction of range facilities, work in the immediate vicinity of the sighting will stop until a Forest Service wildlife biologist has resurveyed the area and any newly recommended mitigation measures have been implemented.
- Construction of range facilities in or near northern goshawk nest sites and post-fledgling family areas will not occur during nesting season (March 1 - September 30). If a goshawk survey is conducted and there is negative response, construction may occur during this period.

**Heritage Resources-**The objective is to protect heritage resources from direct or indirect impacts caused by ground disturbing activities associated with the construction of range facilities and from those caused by grazing, such as cattle rubbing up against and knocking down standing archeological features or intensively trampling artifact scatters.

- Range facilities will be located so as to avoid having high concentrations of livestock on identified heritage resource sites.
- No ground disturbing activities will be conducted within known site boundaries (Forest Plan, p. 61).
- For the 1.5 miles of fence reconstruction under Alternative 3 (Proposed Action), a qualified archeologist must monitor the digging of postholes within the boundaries of the mica mine pursuant to the clearance with the State Historic Preservation Officer.
- No salting will occur within or immediately adjacent to site boundaries to prevent cattle from congregating on heritage resource sites.
- Heritage surveys of proposed range facilities involving ground disturbance or that have the potential to affect heritage resources will be conducted (Forest Plan, p. 60).
- If any unrecorded sites are discovered during the course of project implementation, all project activities in the vicinity of the site(s) will cease and the Resource Area or Forest Archeologist will be notified.

- If it is determined at a later date that impacts from grazing (e.g. trampling of artifact scatters, cattle rubbing against and knocking down standing features) are occurring to heritage sites, measures will be taken (e.g. fencing) to protect them.

**Recreation**-the objective is to maintain access to popular recreation areas and major travel corridors.

- Range facilities such as cattle guards and fences will be constructed so that they continue to allow recreational access.

## Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives.

Tables 4 and 5 provide a summary of the alternatives. The only items listed in Table 4 are those for which the outputs differed between alternatives.

**Table 4. Comparison of Outputs**

Actions included in each alternative	Alternative 1	Alternative 2	Alternative 3
	No Change	No Grazing	Proposed Action
Fence construction	0	0	1.9 miles
Total fence (miles)	21.1	21.1	23.0
Corrals	3	3	4
Developed springs	4	4	7
Wells	0	0	1
Number of cattle	152	0	202

Table 5. Comparison of Effects

		<b>Alternative 1 No Action</b>	<b>Alternative 2 No Grazing</b>	<b>Alternative 3 Proposed Action</b>
<b>Soil, Water, and Air</b>	Impaired soils (all allotments)	< 15% (primarily due to steep slopes); local disturbance around water sources	no change from Alternative 1	no change from Alternative 1
	Unsatisfactory soils (all allotments)	< 12% (primarily due to steep slopes)	no change from Alternative 1	no change from Alternative 1
	Water quality	No change – only Bull and Cow Creeks on 303(d) list	No change – only Bull and Cow Creeks on 303(d) list	No change – only Bull and Cow Creeks on 303(d) list
	Riparian habitat	All streams in proper functioning condition	All streams in proper functioning condition; incremental improvement in habitat	All streams in proper functioning condition; incremental improvement in habitat
	Miles of stream on national forest open to cattle grazing	18	0	18
	Meets Clean Air Act standards?	yes	yes	yes
<b>Vegetation</b>	Vegetative structure	No change from existing condition	Incremental increase in grass cover	Incremental increase in grass cover; incidental trees removed for fence construction
	Satisfactory range	~ 14,870 acres	~ 15,220 acres	~ 15,220 acres
	Unsatisfactory range	~ 350 acres	0 (over time)	0 (over time)
	Invasive species	Some bull thistle on Soldier Creek and Macho Allotments	Some bull thistle on Soldier Creek and Macho Allotments	Some bull thistle on Soldier Creek and Macho Allotments
<b>Recreation and Scenery</b>	Meets visual quality objectives?	yes, except southern end of Macho Allotment	yes, except southern end of Macho Allotment	yes, except southern end of Macho Allotment

		<b>Alternative 1 No Action</b>	<b>Alternative 2 No Grazing</b>	<b>Alternative 3 Proposed Action</b>
	Changes existing recreation opportunity spectrum?	no	no	no
	Encounters between recreationists and cattle?	Few	None	High probability for 2-4 weeks every 5 years that cattle graze in the Carpenter Ridge pasture (Pecos Wilderness)
<b>Heritage Resources</b>	Potential damage from construction of range facilities	none	none	none
	Potential damage from cattle	very low	none	very low
<b>Wildlife and Fish</b>	Population viability	no change	no change	no change
	Habitat quality	no change	increase in grass cover	increase in grass cover

(Summarized from specialist's reports)

