

# Chapter 2

## Alternatives

This chapter describes the alternatives, including the proposed action, developed to address the key issues identified in Chapter 1. It also provides a summary of the environmental consequences of the alternatives. The IDT explored and evaluated a range of alternatives that addressed different management scenarios that could be applied to the allotment. Those identified were Alternative 1 - Proposed Action, Alternative 2 - Recreation/Wildlife Emphasis, and Alternative 3 - the No Grazing (No Action) alternative.

### Alternatives Considered in Detail

Three alternatives are described and analyzed in detail as follows: (For maps see Appendix C).

#### Alternative 1 – Proposed Action Alternative

### Alternative 1 (Proposed Action)

This alternative proposes a one-herd, seven pasture deferred grazing system. The West Lost Trail and Lost Trail pastures would be combined into one pasture, referred to as Lost Trail pasture. One hundred seventy nine (179) cattle would be allowed on the allotment no earlier than June 26 and would rotate through each of seven pastures as one herd. Range improvements would be constructed as needed to meet allotment objectives. This alternative has been identified as the preferred alternative by the decision-maker.

<b>Table 2-1: Alternative 1 - Proposed Action</b>	
Cattle Numbers	179 cow/calf pairs (585 AMs)
Season of Use	June 26 to October 1
Pastures	Seven: Brewster Park, Bear Creek, Upper Rio Grande, Pole Creek, Lost Trail Park, Lost Trail, and Ute Creek
Grazing System	Deferred Rotation
Range Improvements	Construct Lost Trail Campground fence and Bear Creek/Rio Grande Division fence. Remove Kite Lake/Canon Boundary fence

Figure 2-1 displays a typical rotation pattern on the Canon allotment. For an accurate depiction of pastures, see the maps in Appendix C. Days listed are guidelines for planning purposes, actual move dates will be based on utilization levels. This rotation

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will be reversed annually so that pastures are not utilized at the same plant developmental stage year after year. The Ute pasture will be used as the livestock entry and exit point for the allotment.

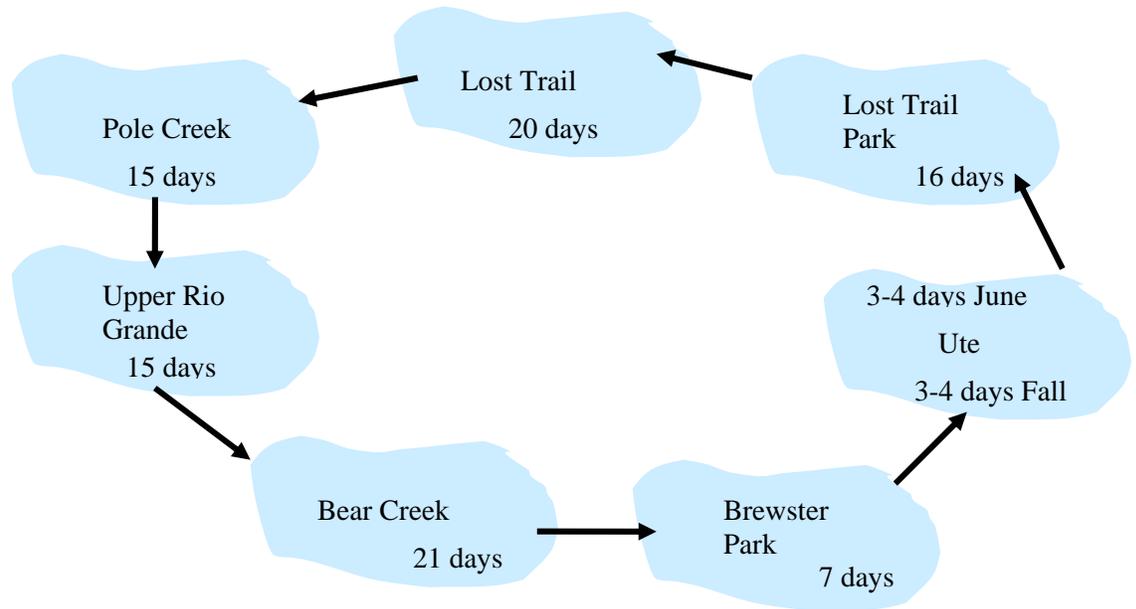


Figure 2-1 – Typical rotation pattern, alternate years, Alternative 1

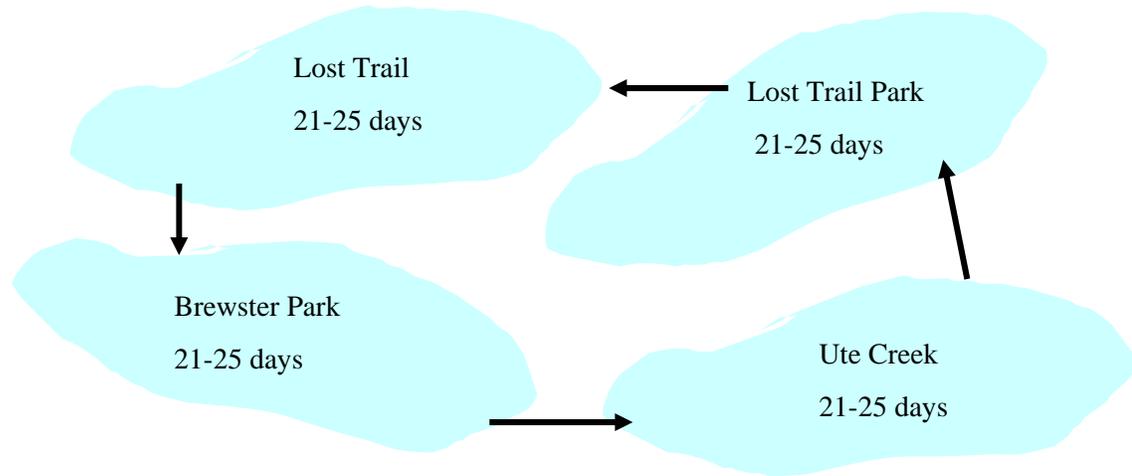
## Alternative 2

### Alternative 2 – Recreation/Wildlife Emphasis Alternative

This alternative would close the Bear Creek, Rio Grande and Pole Creek pastures to grazing. Livestock numbers would be reduced to 104 cow/calf pairs as a result of less available capable range.

Cattle Numbers	104 cow/calf pairs (336 AM's)
Season of Use	June 26 to October 1
Pastures	Four: Brewster Park, Lost Trail Park, Lost Trail, and Ute Creek. In years when the Rio Grande lake bottom is exposed, it would be available for grazing if needed to complement the rotation.
Grazing System	Deferred Rotation
Range Improvements	Construct Lost Trail Campground Fence. Remove Kite Lake/Canon Boundary fence, Rio Grande and Pole Creek Division fences.

Figure 2-2 displays a typical pasture rotation for Alternative 2. Days listed are guidelines for planning purposes, actual move dates will be based on utilization levels. This rotation will be reversed annually so that pastures are not utilized at the same plant developmental stage year after year.



**Figure 2-2 – Typical pasture rotation, alternate years - Alternative 2**

## Alternative 3

### Alternative 3 – No Grazing Alternative<sup>1</sup>

This alternative provides for no permitted livestock grazing (cattle or sheep) on the allotment; therefore, no authorized livestock use would occur. Recreational and pack stock would still be encountered. There would be no need for individual grazing units; therefore, pasture division fences and cattle guards would be removed.

<b>Table 2-3: Alternative 3 - No Grazing Alternative</b>	
Cattle Numbers	None
Season of Use	None
Number of Units	None
Grazing System	None
Range Improvements	Remove the following fences: Kite Lake/Canon Boundary, Rio Grande, Pole Creek Division Fences, Brewster, Lost Trail Park, Lost Trail Division

<sup>1</sup> CEQ regulations for implementing the National Environmental Policy Act (NEPA) require that a no action alternative be developed as a benchmark from which the agency can evaluate the proposed action. No action in rangeland planning is interpreted as no livestock grazing (USDA Forest Service 1996).

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Table 2-4 provides a summary of range improvements by each Alternative.

<b>Table 2-4. Comparison of Range Improvements by Alternative</b>			
Range Improvements	Alternative 1 Proposed Action	Alternative 2 Recreation/Wildlife Emphasis	Alternative 3 No Grazing
Construct Lost Trail Camp. Fence	X	X	
Reconstruct West Lost Trail Division Fence	X	X	
Construct Bear Creek/Rio Grande Div. Fence	X		
Remove Kite Lake/Canon Boundary Fence	X	X	X
Remove Rio Grande & Pole Creek Division Fences		X	X
Remove Brewster, Lost Trail Park, Lost Trail Division Fences			X

## Alternatives Eliminated from Further Consideration

Three alternatives were considered but eliminated from detailed analysis.

### Rest Rotation

A Seven-Pasture Rest-Rotation Grazing System Alternative was considered but dropped from further consideration, because it was too similar to proposed Alternative 1. One pasture would be rested annually; with a different pasture receiving rest every year. This alternative was not considered further as it would not address the watershed health and recreation issues in the grazed pastures.

### Two Herd Management.

Cattle would be split into 2 herds, with each herd using separate pastures, “lower” and “upper”. Livestock control by the permittee would likely be more difficult, conflicts in the lower pastures would not be alleviated, and potential for elk and livestock conflicts would be high. This alternative was not considered further, as it would not address key issues and Standards and Guidelines in the Forest Plan.

### Modified Two Herd Management Alternative

Livestock would be split into two herds. One herd would graze the Bear Creek, Upper Rio Grande, Pole Creek and Brewster Park areas. The other herd would graze the Lost Trail Park, Lost Trail and West Lost Trail units. Ute Creek would be used approximately 7 days in June and 2-3 days at the end of the grazing season. This

alternative was eliminated from detailed analysis because it would not address key issues, or comply with the Forest Plan.

## Mitigation Common to All Action Alternatives

Forest Plan Standards and Guidelines most pertinent to this project (USDA Forest Service 1996) are listed below. A comprehensive listing of all Standards and Guidelines are provided in the Record of Decision for the Forest Plan, Chapter III. All applicable Forest Plan Standards and Guidelines are incorporated here by reference (USDA Forest Service, 1996).

Mitigation measures are actions taken to avoid, minimize, reduce, or eliminate adverse effects as a result of implementing an alternative.

**S&G's common to range, riparian, wildlife and selected MIS species from the Forest Plan**

Remove livestock from riparian areas when average stubble heights on key species reach 4 inches in early-use pastures and 6 inches or more in late-use pastures. Early use is considered prior to August 1, and late use is considered after August 1.

Limit utilization of riparian woody plants to 15-20% of current annual growth, and of herbaceous plants to 40-45% of annual production.

Avoid season-long grazing in riparian areas. Apply short-duration spring grazing, as feasible, to help regrowth and reduce utilization of willows. Control grazing-period length in spring-use riparian pastures to minimize utilization of regrowth; this is normally 20-30 days.

Utilization guideline for upland sites in satisfactory condition is 45% and for those sites in unsatisfactory condition is 25%.

**Effectiveness:** The estimated effectiveness of the above measures is moderate to high. Based on prior experience, the measures are expected to be effective at providing and protecting wildlife habitat for certain species.

## Rangeland Resource Mitigation

Annual range readiness inspections will determine "On" dates (when livestock can begin grazing the first pasture in the rotation). The date will depend on soil moisture content and vegetative development. This will be no earlier than June 26. Depending on annual conditions, this date may be further delayed if soils are too wet, or there is not adequate volume of feed at the beginning of the season.

Livestock will be moved to the next pasture when utilization guidelines are reached. If cattle are in the last pasture, they will be removed from the allotment

Duration of livestock grazing in any pasture will not exceed 30 days.

**Effectiveness:** Moderate to high, as an adjustment in numbers, season, or grazing system will be implemented if standards and guidelines or mitigation measures are not met.

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### Watershed and Fisheries Mitigation

Consider the degree of livestock impacts to stream banks when determining the timing of livestock moves between units. As a general rule, stream banks can receive a maximum of 20-25% alteration while continuing to maintain their health and integrity, as long as the alteration will recover in one season.

Salt will be located well away from cattle concentration areas described in the Affected Environment, Watershed and Aquatics section. Cattle will be dispersed from riparian areas if use is concentrated.

**Effectiveness:** Moderate to high as Forest Plan direction helps provide and protect key aquatic habitat characteristics.

### Soils Mitigation

Salt placement will not be allowed on slopes greater than 35 percent. Salt can be placed on high level benches. Effectiveness will be high as this will mitigate impacts to moderate to high erosion hazard areas.

### Recreation Mitigation

Fence Lost Trail Campground to reduce livestock and people conflicts.

Install cattle guards or self-closing gates on Forest Development roads and trails.

**Effectiveness:** High, prior experience indicates less conflict where people are excluded from livestock use areas, additionally, cattleguards and gates are more user friendly, alleviating conflict.

### Scenic Resources Mitigation

Place range structures, such as fence lines, within the surrounding vegetation. Minimize the amount of fencing within view of travel ways (including roads, trails, and recreation areas).

### Wildlife Mitigation

All fence reconstruction and new fences will be designed to allow free movement of big game.

Incorporate the USDA Region 2 Watershed Conservation Practices Handbook's design criteria with respect to bank trampling and utilization of riparian woody vegetation.

Within lynx habitat, manage livestock grazing in riparian areas and willow carrs to maintain or achieve mid-seral or higher condition to provide cover and forage for prey species.

Manage livestock grazing in shrub-steppe habitats adjacent to and intermixed with forested lynx habitat to maintain or achieve mid-seral or higher condition.

**Effectiveness:** The estimated effectiveness of the above measures is moderate to high. Based on prior experience, the measures are expected to be effective at providing and protecting wildlife habitat.

## Management Indicator Species Mitigation

### **Rio Grande Cutthroat Trout –**

Keep stock tanks, salt supplements, and similar features out of the Water Influence Zone if feasible and out of riparian areas always. Keep stock driveways out the WIZ except at designated points. Harden water gaps and designated stock crossings where needed and feasible.

### **Lincoln's sparrow and Wilson's warbler –**

Manage livestock grazing to maintain or achieve mid-seral or later conditions in shrub-steppe habitats, riparian areas and willow carrs.

In areas where tall, dense cover is desired for ground-nesting birds, residual cover needs to be carried over from previous growing seasons, since some species begin nesting in April and May before spring growth.

### **Vesper sparrow**

Some bird species prefer to nest in undisturbed cover. In areas where these species are a primary consideration, manage livestock grazing to avoid adverse impacts on nesting habitats.

**Effectiveness:** The estimated effectiveness of the above measures is moderate to high. Based on prior experience, the measures are expected to be effective at providing and protecting habitat.

## TES Plants Mitigation

Survey for *Eriophorum altaicum* var. *neogaeum* before implementing any range improvements within wetlands near 12,000 feet in the project area. Adjust location of activity as needed to avoid populations if they are found.

Survey for *Machaeranthera coloradoensis* before implementing any range improvements in the project area. Adjust location of activity as needed to avoid

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populations if they are found.

Survey for *Salix arizonica* before implementing any range improvements in the 10,300 to 10,700 feet elevational band in the project area. Adjust location of activity as needed to avoid populations if they are found.

*Mitigation Effectiveness: Expected to be high. Targeted habitat search has proven to be highly effective in protecting sensitive plant species.*

## Fuels Mitigation

In the event of a wildfire or prescribed fire on the analysis area, pasture rotations will be adjusted to accommodate rangeland health needs.

*Mitigation Effectiveness: Expected to be high. Delaying grazing is an effective tool for rangeland health restoration after a fire.*

## Comparison of Alternatives Summary

This section provides a summary of the differences between the alternatives and how they respond to the key issues. More detailed comparison of the effects of the alternatives is presented in Chapter 3. Table 2-5 provides a summary display of the effects of the alternatives.

- Issue 1**
- Issue 2**
- Issue 3**
- Issue 4**
- Issue 5**

- Wildlife/livestock conflicts**
- Health of soils, watershed and fisheries**
- Recreation and livestock conflicts**
- Capacity and health of the rangeland resource**
- Livestock grazing as a traditional land use**

**Table 2-5. Effects of Alternatives 1, 2 and 3 on Key Issues and Measures of the Issue**

Key Issues and Measures of the Issue	Alternative 1	Alternative 2	Alternative 3
<b>Wildlife/Livestock conflicts</b>			
Big game habitat quality and quantity	Maintained	Maintained in pastures available to livestock	Offers best habitat options
Wildlife displacement associated with livestock grazing	Decreased displacement with cattle in pastures shorter times	No displacement in ungrazed; higher potential in grazed pastures	No displacement

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<b>Key Issues and Measures of the Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Wildlife habitat effectiveness associated with grazing	Moderate effectiveness	Higher effectiveness in closed pastures.	High amount of effectiveness
Livestock/cattle competition for forage	Little to none	Eliminated in closed pastures	None
<b>Health of Soil/Watershed/Fisheries</b>			
Watershed hydrologic function, sediment control, water purity	Moderate recovery of impacted areas	Rate of recovery in grazed pastures impeded	Most rapid recovery of impacted areas
Stream bank stability	Moderate recovery of impacted areas	Rate of recovery in grazed pastures impeded	Most rapid recovery of impacted areas
Greenline trend	Moderate recovery of impacted areas	Rate of recovery in grazed pastures impeded	Most rapid recovery of impacted areas
Fisheries	Improved habitat conditions, trout density/biomass, and population numbers.	Some trout populations would improve due to pasture closures, other populations might decrease due to longer periods of grazing within riparian areas. No immediate threat to populations	Should improve habitat conditions, trout density/biomass and population numbers.
Soil productivity	No decrease of soil productivity, current level maintained	Maintained in grazed units, accelerated recovery in closed units	Accelerated recovery of damaged soils
<b>Recreation/Livestock Conflicts</b>			
Cattle adjacent to Lost Trail summer home area	16-20 days	21 days	none
Developed sites fenced	2	2	Not needed
Gates/cattleguards needed on roads and trails	3	2	0

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<b>Key Issues and Measures of the Issue</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
Cattle adjacent to/on Continental Divide and Colorado Trails	Will be present	Will not be present in closed units	no
Dispersed Recreation visitor/livestock encounters	Moderate in grazed units	Higher in grazed units	None
Wilderness resources	No impact	No impact	No impact
<b>Capacity and Health of rangeland resource</b>			
Plant physiological requirements met for growth and reproduction	Requirements met with implementation of S&G's.	Ungrazed units will have requirements met. Requirements met with implementation of S&G's in grazed units	Yes, with accelerated rate of recovery
Range condition and trend	Satisfactory, upward trend expected	Satisfactory in closed units, upward trend at accelerated rate.	Trend upward at accelerated rate
<b>Financial/Economic</b>			
Grazing as a traditional land use	Yes	Yes	No
Present Net Value to all Partners	\$ (22,345)	\$ (18,405)	\$ (7,976)

Table 2-6 Summary of Effects on Analysis Area

<b>Elements/Resource</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>Alternative 3</b>
<b>Sensitive Species with suitable habitat</b>	No impact	No impact	No impact
<b>T&amp;E Species with suitable habitat</b>	May Affect, no adverse Affect	May Affect, no adverse Affect	
<b>Management Indicator Species</b>	No change in habitat conditions or population trends.	No change in habitat conditions or population trend.	This alternative should not result in any change in habitat conditions or population trend.
<b>Social Resources</b>			
Scenic resources	No impact	May improve visitor perceptions	No impact

Elements/Resource	Alternative 1	Alternative 2	Alternative 3
		along Colorado Trail	
Travelways	Cattleguard/metal gate installation will be more visitor friendly	No cattle related impedance in closed units	No cattle related impacts to roads
<b>Heritage resources</b>	No measurable impact between action alternatives	No measurable impact between action alternatives	No impact
<b>Disturbance Processes</b>			
Undesirable Species (ie Noxious Weeds)	No net increase or decrease due to action alternatives	No net increase or decrease due to action alternatives	No Change
Fire Regime	No change	No change in grazed pastures. Fine fuel loading may increase in ungrazed units.	Fine fuel loading may increase
<b>Allotment Management</b>			
Cattle numbers authorized by permit	179	104	0
Season of Use	6/26-10/1	6/26-10/1	na
Animal Months	585	336	0
Grazing system	Deferred	Deferred	na
Number of pastures	7	4	na
Pastures available to livestock	7	4	0
Duration of livestock in pastures	No more than 30 days	21-25	na
<b>Range Infrastructure</b>			
Fences constructed	1	0	0
Fences removed	1	3	6
Gates and cattleguards installed	3	2	

## Project Level Monitoring

Monitoring of the proposed action, its effect on the environment, its effectiveness in meeting the goals and objectives of the proposal and the Forest Plan, will take place in

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various forms. Monitoring projects identified by the IDT focus on the issues identified for this project. Other monitoring is identified in Chapter 5 of the Forest Plan.

The monitoring requirements as outlined in the Revised Forest and Land Management Plan will be followed where they are applicable to the rangeland resource.

### Range Monitoring

Monitoring will establish a record to determine whether livestock numbers, season of use, and levels of forage utilization use are meeting Forest Plan objectives for the allotment.

The Forest Service will read the permanent transects at least once in 10 years, or when the grazing strategy changes, whichever occurs first. This monitoring will be effective to determine whether management strategies are effective in maintaining stable to upward ecological trends in key riparian and upland areas.

The Forest Service and term permit holder are responsible for determining utilization. Forage utilization will be measured in key areas in the allotment. The forage utilization will be measured prior to the scheduled move date, to document actual use at that time and to determine if length of time in unit is appropriate. It will also determine if livestock need to be rotated or moved early to meet objectives. The permittee is to notify the District range conservationist about utilization levels and scheduled move days.

The Forest Service will conduct compliance checks on authorized use of the allotment. Verification may be made of livestock ownership, number, kind, and class on the allotment at any time. Inspections, monitoring, and continual dialogue with permittees provides an ongoing feedback loop for the need to maintain or change management on the ground. Issuance of a permit, and subsequent allotment administration, by its very nature, establishes an obligation for close working relations between agency personnel and permittees.

Photo points associated with permanent riparian and upland vegetation transects will be rephotographed at 3-5 year intervals.

### Site Specific MIS Habitat Monitoring

Forest level monitoring of population trends is more appropriate at the Forest level than at the scale and extent of the Canon Allotment. Forest protocols have been developed to build upon existing Forest-level trend data. However, monitoring items have been identified on the allotment to provide managers with information to verify assumptions of habitat being well distributed and occupied, rather than to acquire trend data.

Complete one random survey on trout bearing streams within the allotment every 3rd year to determine a) cumulative stream bank alteration (no more than 20-25% of any stream reach) b) document and report instances of salting within the WIZ and c) relative fish abundance and species composition. If a core/conservation population of RGCT is reestablished in any of the streams, then the stream would be included in the annual monitoring program and be surveyed every five years.

### Rio Grande Cutthroat Trout

## **Vesper Sparrow**

Transects are in place in cooperation with Rocky Mountain Bird Observatory, throughout the Forest. These transects are designed to be statistically rigorous and produce data for analysis of population trends of approximately 167 bird species that breed in Colorado. These transects will continue to be read on a yearly basis to help determine the overall trend of birds species including Wilson's Warblers and Lincoln's Sparrow, throughout the Forest.

Complete upland utilization transects to examine Rangeland Condition utilizing forage utilization guidelines and residue allowances. Record observations of Vesper sparrow.

## **Lincoln's sparrow and Wilson's warbler.**

Complete willow survey every other year to examine for utilization not to exceed 15-25% of current annual growth. Record observations of Lincoln's sparrow and Wilson's warblers.

In conjunction with the willow survey, complete analysis of herbaceous plant utilization not to exceed 40-45% of annual production. Record observations of Lincoln's sparrow and Wilson's warblers.