

NARRATIVE

The area where a Rest-Rotation Plan is to be tried is called the Escalante Desert. The rainfall in the area will vary from 8-10 inches annually and most of the moisture is received in the Spring and Fall. The Area is bounded on the West by 50 Mile Mountain, and on the North and East by the Escalante River Canyon, both of which are natural barriers.

The trend of the area is downward except for those areas that are at present inadequately watered. The density of the Indian Ricegrass, Fourwing Saltbush, and Gayeta grass is decreasing and the density of Blue Grama is increasing. This downward trend appears to be largely due to excessive and continuous Spring use.

The Rest-Rotation Plan is based on utilization studies completed in the Spring of 1964 and the Spring of 1965 which indicates an average use of 50%. Utilization over the area is very uneven due to the poor distribution of water and lack of herding of livestock. The area is at present used by cattle during the Winter and Spring (November 11 - June 15) with a small amount of Summer use (June 15 - September 30). The Winter-Spring demand is 16,037 AUM's or 2,174 animal units and the Summer use is 1,015 AUM's or 290 animal units.

The only alternative to using a Rest-Rotation Plan would be to terminate grazing at the end of March which would work a hardship on the ranch operators. Although eliminating the Spring use would improve the range condition, it is doubtful if it would obtain the desired results.

The fences are located so as to utilize natural barriers whenever possible. Water will be developed in each pasture to furnish adequate water for livestock.

Escalante Desert

REST & ROTATION MANAGEMENT PLAN

PASTURE NO.	10	11	12	1	2	3	4/1	5	6	7	8	9
1	3780 AUM'S or 687 AU. 70% Utilization						Rest					
2	2704 AUM'S. or 492 AU. 50% Utilization						Rest			6/15 1015 AUM'S or 290 AU. 19% Utilizat.		
3	2704 AUM'S or 492 AU. 50% Utilization						Rest					
4	Rest											
5	Rest						4 3340 AUM'S or 1670 AU. 62% Util.			6 Rest		
6	3780 AUM'S or 504 AU. 70% Utilization						Rest					

Demand of winter use of 16,307 AUM'S or 2,174 AU. of cattle.
 Demand of summer use of 1,015 AUM'S or 290 AU. of Cattle.

DESCRIPTION, INVENTORY AND ANALYSIS OF ALLOTMENT

Class of stock Cattle Stocking (AUs) 2174 to 290 (AUMs) 16,307 Winter
 Season of grazing (Dates) 10/15 to 6/30
6/15 to 9/30 1,015 Summer
 Character of topography Rolling to rough

Table 1. Area of natural vegetation types and culturally treated areas grazed by livestock and by game

Vegetation types and culturally treated areas <u>1/</u>	Total area of type		Area grazed by livestock		Area grazed by game	
			At present	30 years from now <u>2/</u>	At present	30 years from now <u>2/</u>
(name)	(acres)	(per-cent)	(acres)	(acres)	(acres)	(acres)
1 Pinyon - Juniper	66,546	32	44,915	66,546	29,940	29,940
2 Grassland	25,510	12	24,234	25,510	2550	2550
3 Mixed Desert Shrub	58,150	27	42,040	58,150	36,040	42,040
4 Sagebrush	2048	2	1840	2048	1050	1050
Annuals	4274	2	4172	4274	400	400
Waste	52,197	25	8400	16,790	21,000	27,280
Other						
Allotment Total	208,725	100	121,601	173,318	90,980	103,260

1/ List culturally treated areas under appropriate vegetation types.
2/ Under improved management.

Table 4. Estimated utilization of available forage in natural vegetation types and culturally treated areas and condition of range

Vegetation type or treated area ^{1/}	Use of total tonnage of forage in type (percent)	Range condition				
		Vigor of forage species (L, M, H) ^{2/}	Ratio of good to poor forage species (percent) ^{3/}	Density of forage (percent of potential)	Sheet Erosion	
					Depth (Inches)	Extent (Percent of ground area)
Pinyon - Juniper	50	M	Fair	30%	1"	50
Grassland	70	L	Fair	70%	1/2"	30
Mixed Desert Shrub	40	M	Good	40%	-	-
Sagebrush	60	L	Fair	30%	1"	30
Annuals	90	L	Poor	10%	1.5	80
Allotment average	50% ✓					

1/ List treated areas (reseeded, sprayed, etc.) under appropriate vegetation types.
 2/ L = low, M = moderate, H = high.
 3/ From Table 2 Excellent and good species = good; fair and poor species = poor.

What percent of the livestock forage on the range is used by game? 5%

What are the principal foraging game animals? Deer

Table 2. Composition, value, use and development of plant species in natural vegetation type or culturally treated area

Type or treated area (name) Pinyon - Juniper

Species	Amount in cover ^{2/} (percent)	Forage value				Utilization ave. (Perc 't)	Start growth (date)	Flow-ering (date)	Development Seed ripe (date)	Regrowth Leaves -twigs (date)	3/ Flower stalks (date)
		Ex	Gd	Fr	Pr						
Grasses & Grass-like											
Oryzopsis hymenoides	2	X				90	4/1	6/1	6/15	4/30	4/15
Hilaria Jamesii	5		X			50	5/1	6/15	7/1	8/15	8/1
Bouteloua gracilis	15			X		40	5/1	7/1	7/15	8/15	8/1
Sporobolus cryptandrou	3		X			50	4/15	7/1	7/15	8/15	8/1
						(45)					
Total	25										
Forbs											
Eriogonum Spp.	2				X						
Penstemon Spp.	3				X						
Astragalus Spp.	3				X						
Sphaeralcea Spp.	5			X		40	3/1	6/1	7/1	ANNUAL	ANNUAL
Total	13										
Shrubs and trees ^{1/}											
Artemisia tridentata	10				X						
Juniperus utahensis	35				X						
Atriplex canescens	2	X				90	5/1	6/15	7/15	5/15	5/1
Ephedra Spp.	4		X			30	4/15	5/20	7/1	6/1	5/15
Gutierrezia sarothrae	11	X				(45)					
Purshia tridentata	trace	X									
Total	62										
Grand Total	100										

^{1/} Including conifers

^{2/} For trees and shrubs include estimates only for species that can be changed or removed in a range improvement program.

^{3/} How late in spring can the species be grazed and still produce grazable leaves or twigs or seed-producing flower stalks?

Table 2. Composition, value, use and development of plant species in natural vegetation type or culturally treated area

Type or treated area (name) Mixed Desert Shrub

Species	Amount in cover	Forage value				Utili- zation ave.	Start growth	Flow- ering	Seed ripe	Development Leaves -twigs	Regrowth Flower stalk
		Ex	Gd	Fr	Pr						
Grasses & Grass-like	(percent)	(Check one)				(Perc 't)	(date)	(date)	(date)	(date)	(date)
Oryzopsis hymenoides	5	X				60	4/1	5/20	6/10	4/30	4/10
Hilaria jamesii	6		X			40	4/20	6/10	6/25	8/15	8/1
Bouteloua gracilis	4			X		30	4/25	6/20	7/10	8/15	8/1
Sporobolus cryptandrous	7		X			40	4/10	6/20	7/10	8/15	8/1
Muhlenbergia pungens	8				X	10	5/15	7/10	7/30	8/15	8/1
						(40)					
Total	30										
Forbs											
Eriogonum Spp.	3				X						
Salsola kali	3				X						
Sphaeralcea	3			X		(40)	4/15	5/20	6/20	ANNUAL	
Brassica Spp.	2				X						
Helianthus annuus	2			X							
Total	13										
Shrubs and trees <u>1/</u>											
Ephedra Spp.	20		X			30	4/15	5/20	7/1	6/1	5/15
Coleogyne ramosissima	5				X						
Atriplex canescens	1	X				90	5/1	6/15	7/15	5/15	5/1
Poliomintha incana	5				X						
Juniperus utahensis	5				X						
Artemesia filifolia	14		X			30	4/1	5/1	6/20	5/15	5/1
Gutierrezia sarothrae	7				X						
Total	57										
Grand Total	100										

1/ Including conifers

2/ For trees and shrubs include estimates only for species that can be changed or removed in a range improvement program.

3/ How late in spring can the species be grazed and still produce grazable leaves or twigs or seed-producing flower stalks?

Table 2. Composition, value, use and development of plant species in natural vegetation type or culturally treated area

Type or treated area (name) Sagebrush

Species	Amount in cover	Forage value				Utili- zation ave.	Start growth (date)	Flow- ering (date)	Seed ripe (date)	Development Leaves -twigs (date)	Regrowth Flow stalk (date)
		Ex	Gd	Fr	Pr						
Grasses & Grass-like	2/ (percent)	Check one)				(Perc 't)	(date)	(date)	(date)	(date)	(date)
<i>Oryzopsis hymenoides</i>	3	X				90	4/1	6/1	6/15	4/30	4/15
<i>Hilaria jamesii</i>	7		X			60	5/1	6/15	7/1	8/15	8/1
<i>Bouteloua gracilis</i>	15			X		40	5/10	7/1	7/15	8/15	8/1
<i>Sporobolus cryptandrous</i>	2		X			50	4/15	7/1	7/15	8/15	8/1
<i>Sitanion hystrix</i>	3			X		40	4/1	6/1	6/15	4/30	4/15
Total	30										
Forbs											
<i>Penstemon Spp.</i>	1										
<i>Astragalus Spp.</i>	2										
<i>Sphaeralcea Spp.</i>	3					40	5/1	6/1	7/1	ANNUAL	
<i>Castilleja Spp.</i>	1										
<i>Lepidium perfoliatum</i>	3										
Total	10										
Shrubs and trees <u>1/</u>											
<i>Artemesia tridentata</i>	50					-					
<i>Gutierrezia sarothrae</i>	7					-					
<i>Atriplex canescens.</i>	3					90	5/1	6/15	7/15	5/15	5/1
Total	60										
Grand Total	100										

1/ Including conifers2/ For trees and shrubs include estimates only for species that can be changed or removed in a range improvement program.3/ How late in spring can the species be grazed and still produce grazable leaves or twigs or seed-producing flower stalks?

Table 2. Composition, value, use and development of plant species in natural vegetation type or culturally treated area

Type or treated area (name) Grasslands

Species	Amount in cover 2/ (percent)	Forage value				Utilization ave. (Perc 't)	Start growth (date)	Flow-ering (date)	Development Seed ripe (date)	Regrowth Leaves -twigs (date)	3 Flower stalk (date)
		Ex	Gd	Fr	Pr						
Grasses & Grass-like		(Check one)									
<i>Oryzopsis hymenoides</i>	1	X				90	4/1	6/1	6/15	4/20	4/1
<i>Hilaria Jamesii</i>	15		X			60	5/1	6/15	7/1	8/15	8/1
<i>Bouteloua gracilis</i>	50			X		40	5/1	7/1	7/15	8/15	8/1
<i>Sporobolus cryptandrous</i>	4		X			60	4/15	7/1	7/15	8/15	8/1
						56					
Total	70										
Forbs											
<i>Cleome</i> spp.	4				X						
<i>Sphaeralcea</i> spp.	2			X			5/1	6/1	7/1	ANNUAL	
<i>Lappula</i> spp.	trace				X						
<i>Salsola</i> kalf	8				X						
Total	14										
Shrubs and trees 1/											
<i>Atriplex canescens</i>	2	X				90	5/1	6/15	7/15	5/15	5/1
<i>Ephedra</i> spp.	1		X			50	4/15	5/20	7/1	6/1	5/15
<i>Gutierrezia sarothrae</i>	13				X						
<i>Juniperus utahensis</i>	trace					75					
Total	16										
Grand Total	100										

1/ Including conifers

2/ For trees and shrubs include estimates only for species that can be changed or removed in a range improvement program.

3/ How late in spring can the species be grazed and still produce grazable leaves or twigs or seed-producing flower stalks?

Escabante Desert

	Area	Use
Grasslands	75,510	55
Pinyon-Juniper	66,546	45
Mixed Desert Shrub	58,150	40
Sagebrush	2048	50
Annuals	4274	
Waste	<u>52,197</u>	<u>50%</u>
	208,725	
	173,318 potentially usable	
Shrubs ATcan	75%+	

10 acres/AUM

$$= 17322 \overline{) 173,318}$$

