

RED CREEK CATTLE ALLOTMENT
MANAGEMENT PLAN
CEDAR CITY RANGER DISTRICT
DIXIE NATIONAL FOREST
1985

Plan written in 1970 by Norman Huntsman, DFR, updated in 1975 by John Padden, Range Conservationist and in 1977 by Dale B. Harris, Range Conservationist.

Updated By: Dale B. Harris Date: 4/15/85
Range Conservationist

Recommended for Approval By: Robert H. Padden Date: 4/15/85
District Ranger

Recommended for Approval By: Frank Jensen Date: 4/19/85
Range Staff Officer

Approval By: Frank Jensen Date: 4/19/85
acting Forest Supervisor

I. GENERAL INFORMATION

A. Description

Cattle permitted on the Red Creek cattle allotment graze the general geographic areas of Upper Bear Valley, Cottonwood Creek, Red Creek, Little Creek, Delong Creek and Sandy Creek. This general area comprises the north 15 percent of the Cedar City District.

Elevations on the allotment range from about 6,000 feet at the National Forest boundary in Cottonwood Creek to 10,135 on Little Creek Peak.

Annual precipitation ranges from approximately 12 inches at the lower elevation in Cottonwood Creek and Sandy Creek to 30 inches at the head of the Blowup drainage.

The allotment contains a total of 54,691 acres. There are 52,688 acres of National Forest land and 2,003 acres of privately owned land.

The private land is fenced except for some parcels that are included with National Forest land. There are two pasture allotment permits. They are issued to Alma Evans and Arthur Evans. In these cases, some National Forest land is fenced in with private and similar acreage of private land is fenced outside with the National Forest.

B. History and Current Status

From the creation of the National Forest until after 1940, the area within the present Red Creek allotment was grazed by both sheep and cattle. Permitted livestock numbers, grazing seasons and allotment boundaries varied considerably from 1916 to 1957.

Portions of the current allotment were exclusive cattle range in 1939. This area was called the Red Creek - Bear Valley C&H allotment. The remainder was grazed by both cattle and sheep. (Table I in Appendix.)

In 1958, an agreement was reached between permittees involved in the separation of common use on the Red Creek, Buckskin - Sandy and Cottonwood-Caddy allotments. Fence lines and boundaries were agreed on in Bear Valley. Watering privileges were retained for sheep at Navajo Spring. Also, the sheep permitted on Buckskin - Sandy were authorized to trail across the Red Creek cattle allotment in the spring and fall.

At the permittee's request, the Red Creek allotment was divided into north and south divisions on a trial basis in 1966. Specific permittees were assigned to each division and grazing has continued under this system since that time.

In 1973, the Cottonwood-Caddy S&G allotment was converted to cattle and the grazing capacity was added to the Red Creek and Little Valleys allotments as a result of several permit transfers and a change of class of livestock.

In addition to permit transfers, an allotment boundary change was made along the southwest side to follow the Forks Valley - Clear Creek S&G and reduced the Red Creek allotment by 521 acres.

In 1975, the 1200 head sheep permit on the Buckskin - Sandy S&G allotment was converted to a 60 head cattle permit. The permit and allotment were added to the Red Creek C&H allotment.

At the present time there are 15 permittees on the allotment. They graze 690 cattle for a June 16 to October 15 season (2740 AM's). Refer to Appendix, Table I for names of permittees and livestock obligations.

C. Ranch Operation and Livestock

Practically all of the permittees grazing livestock on the allotment are engaged in cow-calf operations. The majority live in the communities of Paragonah, Parowan and Cedar City, Iron County, Utah, and have ranch operations in that area.

Approximately 90 percent of the cattle owned by the permittees rely upon the Red Creek allotment for summer grazing. The remaining 10 percent graze privately owned or leased lands. Some of the permittees graze adjacent BLM lands in Lower Bear Valley and Buckskin Valley in the spring and fall. Many permittees graze their cattle on private agricultural lands near Paragonah at the close of the grazing season.

A majority of the permittees graze Hereford cattle, although some Angus and crossbred cattle are also grazed. Bulls must be of a beef type of passing grade. Some of the permittees practice cross breeding with Hereford cows and Angus bulls.

The grazing association employs a system of "bull power" where each permittee must have one bull for every thirty cows or must purchase bull power through the association from other permittees to bring his stock into a one to thirty, bull to cow ratio.

Approximately 50 percent of the cows have been bred and are in gestation prior to entry on the allotment. The average breeding date is June 1, resulting in the majority of the calves being born the first part of March.

Many of the permittees treat their cattle to control parasites (lice and grubs). Death loss of cows and calves on the allotment has not been a serious problem in the past. Some death losses occur from pneumonia, black leg, scours and brisket disease.

Livestock are marketed in various ways when they leave the National Forest. Most of the calves are sold as "feeders". Some are retained for replacement and some are sold as beef cattle for slaughter. Most of the livestock sales are to local buyers or sold through local auctions.

D. Grazing Capacity

There are 13,629 acres of suitable range open to cattle grazing. Practically all of the forage consumed is produced on this acreage. Most of the remaining 30,765 acres are unsuitable for cattle grazing. The remaining 8,294 acres on the allotment are nonforage producing timber and rocky areas. Range suitability, condition classes and vegetative types are shown in Tables II and III.

Range analysis was completed in 1964-65 and is now somewhat outdated. Based on observations and knowledge of the area, condition classes have ~~been~~ changed. Acreage figures shown in Table III have been adjusted to reflect these changes.

In 1976, the grazing season was extended from September 30 to October 10, with the number remaining the same.

In 1982, a temporary increase of 10 percent in numbers and 5 days at the end of the season was granted provided the association would furnish a range rider to improve livestock distribution and maintain improvements. This action is to be firmed up by 1986 when the grazing permits are renewed.

II. MANAGEMENT GOALS

Management goals for the Red Creek Cattle allotment are:

- ✓ A. Maintain or improve forage and watershed conditions on the range by keeping the vegetation in a static or upward trend.
- ✓ B. Provide a full forage supply for the 685 head of permitted cattle and their calves for the June 16 to October 15 season (2740 AM's).
- ✓ C. Manage the allotment as two separate divisions, north and south, each with it's own individual rotation system.
- ✓ D. Maintain at least two permanent condition and trend studies on key areas in each division.
- ✓ E. Employ a grazing system which will maintain optimum plant vigor and improve soil stability on key areas such as Bear Creek, Cottonwood Creek, Little Creek, Red Creek, Williamson Ranch, and Blue Meadows.
- F. Encourage livestock utilization on outlying areas through proper salting, herding and riding.
- G. Employ a grazing system that will require minimum disturbance of the cattle and resulting losses in weight gain.
- ✓ H. Employ a grazing system that will periodically utilize crested wheatgrass "wolf" plants; particular areas of concern are the Guard Station and LeFevre pastures.
- ✓ I. Develop water in secondary (suitable unused) range types, particularly in Middle Canyon, Buckskin, Cottonwood and Sandy Creek, as funds and priorities permit.
- J. Continue to upgrade range improvements.
- K. Maintain the habitat of the Utah prairie dog (*Cynomys parvidine*) colony in Bear Valley.
- ✓ L. Provide for deer forage in the management system.
- ✓ M. Balance livestock utilization and deer use to sustain or improve deer forage in Lower Cottonwood and Mineral Canyon.

III. ACTION PROGRAM

A. Management System

The Red Creek allotment will continue to be managed as two separate divisions, each with it's separate rotation system. Each system is based on the physiological needs of key forage species and designed to fit the terrain.

Following is the grazing schedule for the North Division.

NORTH DIVISION

Year	UNIT		
	#1 Cottonwood- Guard Station	#2 LeFevre- Sandy	#3 Mid- Canyon
1	A	B	B
2	B	A	B

Repeat Cycle

A - Graze first (approximately 6/16 - 8/30) - at range readiness for maximum livestock production until proper use is reached. Intent is to make adequate utilization of crested wheatgrass periodically to prevent wolf plants.

B - Graze second (approximately 9/1 - 10/15) - after grasses have developed seed heads until proper use is reached or end of grazing season. Intent is to restore vigor in the plant and trample in seed.

When Cottonwood is grazed first, 100 to 150 head will be distributed in Cottonwood and the remainder in the Guard Station Unit. Cattle scheduled for Cottonwood will first be put below the drift fence at the narrows and held there until proper use is reached. This normally amounts to about three weeks grazing time. The cattle will then be distributed to Buckskin, Edwards Pond, Upper Cottonwood Pond and Cottonwood Mountain Pond until proper use, which is between August 15 and September 1, and then moved into Bear Valley with the other cattle.

When LeFevre - Sandy is grazed first, 150 - 200 head of cattle will be distributed in Delong, Three Mile and Sandy Creek drainages. The remainder will be placed in LeFevre. During treatment B, cattle will be distributed either in the Guard Station or LeFevre portions of their respective units.

Middle Canyon will be grazed during treatment B with approximately 50 cattle.

It is imperative that herding be done while in any of the units to keep the cattle uniformly distributed.

Following is the grazing formula for four treatments on the South Division of the allotment. Each of the pastures will receive one of the treatments A, B, C or Rest each year.

SOUTH DIVISION

Year	Pasture			
	#1 Aspen Spring	#2 Little Creek	#3 Blowup	#4 Williamson Ranch
1	A	Rest	B	C
2	Rest	A	C	B
Repeat Cycle				

A - Graze first (approximately 6/16 - 7/15) - at range readiness for maximum livestock production until proper use is reached. Intent is to make adequate utilization of crested wheatgrass periodically to prevent wolf plants.

B - Graze second (approximately 7/16- 8/30) - after grasses are well on their way to completing their growth cycle until proper use is reached.

C - Graze third (approximately 9/1 - 10/15) - after grasses have developed seed heads until proper use is reached or end of grazing season. Intent is to trample in seed.

Rest-Rest season long to restore vigor, or if needed, (and occasionally planned) cattle can be put in last 20 days, or so, of grazing season to trample in seed.

For treatment A, actual time in Little Creek should be about three weeks and in Aspen it should be about six weeks. While the cattle are in the Little Creek unit it is imperative that the use is closely monitored after about two weeks to avoid overuse along Little Creek.

With this system, two of the four pastures complete their growth cycle each year and the third (B treatment) nearly does. The cattle graze on crested wheatgrass pasture during it's most nutritive period and then go to the "summer unit" where grasses stay palatable much longer.

B. Proper Use Criteria

The R-4 Range Analysis Handbook (Section 60) points out that 50 percent utilization of the species being managed is about all the use that should be made on most ranges. The exception is wet meadows in good condition and crested wheatgrass reseeding where up to 60 percent utilization might be made. Therefore, in keeping with Regional direction, a proper use factor of 50 percent of the palatable grasses growing on the suitable range will be used, except for crested wheatgrass and wet meadows where 60 percent utilization will be used.

C. Administrative Action to Implement Program

District personnel will check the allotment periodically during the grazing season. They will make utilization and followup studies and note the progress of the cattle in the system. The permittee will move the cattle as specified in the annual plan of use or when informed by District personnel that proper use has been reached.

The permittees will need to have a rider available to properly move and distribute cattle. The rider furnished by the association is an important part of the management of the Red Creek allotment and will continue to be emphasized by the Forest Service as part of the 1982 agreement described in Section D of the plan. The permittee will perform needed maintenance of fences and water developments as outlined in part 3 of this grazing permit.

D. Range Development Program

In 1957 and 1958, approximately 3290 acres of big sagebrush range were plowed and seeded in Bear Valley and Little Creek at a total cost of \$54,000.

Some contour furrowing work was done in Bear Valley (about 600 acres) to help control water runoff in 1961.

In the fall of 1970, 1283 acres of Pinyon-Juniper range in Mineral Canyon and Cottonwood Canyon were double chained and aerial seeded. Grass and forb seed was aerial seeded prior to the second chaining. Seed dribblers, attached to each tractor, were used to plant the browse seed during "back chaining".

Most of the range development work has been accomplished on the allotment. However, there remains some potential burning areas and two potential chain and seed areas. Also, there are a few more water developments to be completed.

Table IV shows an inventory of structural range improvements including those remaining to be constructed and those needing reconstruction.

Each permittee is responsible for his assigned maintenance responsibility of structural range improvements on the allotment.

E. Correlation With Other Uses

Under the planned systems of grazing, other uses within the allotment should benefit. Management will correlate with other disciplines as outlined in the Markagunt Plateau Land Use Plan.

1. Timber - Small areas of commercial timber exist on the North Division of the allotment. Logging is not planned in these areas in the near future. When logging plans are formulated, they should be correlated with the grazing use of the area. Timber harvest will improve range forage production and accessibility and will be beneficial to the grazing resource.
2. Recreation - Recreation on the allotment consists mainly of undeveloped camping. Red Creek Reservoir is a popular recreation area. Development consists of two vault toilets and parking areas. The entire allotment is used heavily by deer and elk hunters during their respective seasons.
3. Watershed - The proposed grazing plan will increase forage production and ground cover. The increase in new plants and ground cover will help stabilize the watershed. Some of the watershed problem areas are on steep ground that is not grazed by livestock. The grazing system will not effect these areas.
4. Wildlife - Deer currently graze most of the allotment. There is adequate forage available for both deer and cattle.

The planned grazing system should improve big game habitat. All improvement work will take big game into consideration. Water will be made available for wildlife in spring development. Wires will be located at recommended heights (where possible) on range fences to allow for wildlife movement.

Elk are increasing on the allotment and have been sighted on many areas. The largest concentrations are on Bear Valley Peak and Delong Creek. The existing elk population will be managed within habitat constraints.

A small population of sage grouse inhabit Bear Valley. Management activities are conducted so as to perpetuate and hopefully increase their numbers. The habitat for the Utah prairie dogs will be maintained in Bear Valley.

5. Fire - Fire hazard will be reduced on areas grazed and will be increased on areas rested. Increased ground cover over a period of years will increase the continuity of the fuel and thus increase the fire danger.

Fires have not been a serious problem on this area in the past.

6. Minerals - Green flagstone occurs in commercial quantities on the north division of the allotment. Ore containing valuable minerals occurs in the vicinity around Iron Peak. Both mining areas are currently inactive. Correlation of uses is needed primarily in the transportation of minerals through management fences and across livestock grazing lands.

VI. FOLLOWUP PROGRAM

A. Allotment Inspection

A followup program will be implemented to see that the allotment objectives are being met. It will be directed toward firming up the allotment capacity, making changes to improve the management system and gathering data to evaluate apparent and long term trends of the vegetation and soil. Actual results will be checked against those needed to accomplish management goals for the allotment.

Field observations and notes will be made when cattle enter and leave each unit. Unit examination record (Form 2200-15) will be completed in conjunction with these observations.

- B. Six Parker 3-Step trend studies were installed on the allotment in 1957. Three are still useable. They are located in Blue Meadow, Williamson and Blowup. These transects will be modified and kept, and an approved trend study will be installed in the Guard Station unit.

Studies by unit are summarized below:

<u>Name of Area</u>	<u>Unit</u>	<u>Type of Study</u>	<u>Est.</u>	<u>Schedule</u>
Bear Valley G.S.	Cottonwood-G.S.	Nested Frequency	1985	5-10 years
Williamson Ranch	Williamson	Parker 3-Step	1957	5-10 years
Blowup	Blowup	Parker 3-Step	1957	5-10 years
Blue Meadow	Sandy Creek	Parker 3-Step	1957	5-10 years

TABLE I
 RED CREEK CATTLE ALLOTMENT
 PERMITTEE AND NUMBER OF CATTLE

<u>Permittee</u>	<u>Number</u>	<u>Season</u>	<u>AM's</u>	<u>Private Land Permit No.</u>	<u>A.M.</u>
<u>North Division</u>					
Alma Evans	41	6/16 - 10/15	164		
Douglas Evans	30	6/16 - 10/15	120	3	12
Carlisle Hulet	44	6/16 - 10/15	176		
Richard Abbott	40	6/16 - 10/15	160		
Tom Robinson	73	6/16 - 10/15	292		
Dean Robinson	32	6/16 - 10/15	128		
Carlos Robinson	102	6/16 - 10/15	408		
Mitchell Robinson	24	6/16 - 10/15	96		
Totals	386		1544	3	12
<u>South Division</u>					
Richard Abbott	6	6/16 - 10/15	24		
Lyle and Steven Barton	26	6/16 - 10/15	104		
Clarence Benson	12	6/16 - 10/15	48		
Bill Brady	85	6/16 - 10/15	340		
Ralph Lister	61	6/16 - 10/15	244		
Harold Mitchell	74	6/16 - 10/15	296		
Carl Morris	22	6/16 - 10/15	88		
Earl Thornton	18	6/16 - 10/15	72		
Totals	304		1216		

TABLE II
 RED CREEK CATTLE ALLOTMENT
 RANGE SUITABILITY AND CONDITION OF SUITABLE RANGE

	National Forest Acres	Percent of Totals
Total Allotment Area	52,327	100
Net Suitable Area	<u>13,268</u>	
Primary Range - S	9,870	<u>100</u>
Excellent Condition	65	1
Good Condition	6,289	61
Fair Condition	3,411	33
Poor Condition	466	5
Secondary Range - S	3,398	<u>100</u>
Good Condition	2,711	80
Fair Condition	565	16
Poor Condition	122	4
Net Unsuitable Area	<u>39,059</u>	
Unsuitable	30,765	<u>100</u>
Non-Range Type 7 & 8	8,294	<u>100</u>

TABLE III
 RED CREEK CATTLE ALLOTMENT
 VEGETATIVE TYPE ACREAGES
 WITHIN
 PRIMARY, SECONDARY AND UNSUITABLE RANGE CLASSIFICATIONS

	<u>Vegetative Type</u>	<u>Acres</u>	<u>Percent of Total</u>
Primary Range	Aspen	904	9
	Wet Meadow	203	2
	Dry Meadow	10	
	Timber	473	5
	Sagebrush (Part Reseeded)	4,113	40
	Grass (Part Reseeded)	1,652	20
	Browse	1,652	16
	Pinyon-Juniper	863	8
	TOTAL	9,870	100
Secondary Range	Sagebrush	2,914	86
	Dry Meadow	484	14
	TOTAL	3,398	100
Unsuitable Range	Pinyon-Juniper	9,856	28
	Sagebrush	3,189 (1542)	20
	Browse	16,153 (4497)	46
	Grass	38	1
	Aspen	1,350 (249)	4
	Timber	179	1
	TOTAL	30,765	100

TABLE IV
RED CREEK CATTLE ALLOTMENT
STRUCTURAL RANGE IMPROVEMENTS

NAME	TYPE	SIZE	LOCATION	CONSTRUCTED	REMARKS
<u>Water Development</u>					
White Canyon	Metal Flume Trough	25'	White Canyon Spring Sec. 21, T33S, R7W	1930	
Mineral Spring	Ring Trough	8'	Mineral Spring Sec. 8, T33S, R7W	1977	
Aspen Spring	Ring Trough	16'	Aspen Spring Sec. 28, T33S, R7W	1977	
Navajo Spring	Metal Flume Trough	50'	Navajo Spring Sec. 24, T33S, R6 1/2W	1960	
Navajo #2	Metal Flume Trough 1/4 mi Pipeline	10'	West of Navajo Spring Sec. 24, T33S, R6 1/2W	1967	
Oak Spring	Metal Flume Trough	20'	Oak Spring Sec. 28, T33S, R7W	1961	
Iron Peak	Metal Flume Trough	20'	Iron Peak Spring Sec. 19, T33S, R7W	1962	
Cold Spring	Round Trough		NW Little Creek Peak Sec. 26, T33S, R7W	1964	
North Swale	Trough Pipeline	20' ring 2 mi	Sec. 1, 12, T33S, R7W Sec. 12, 13, T33S, R7W	1977	
Lower Cottonwood	Headbox Trough		Lower Cottonwood Spring Sec. 33, T32S, R7W	1929	
Evans Spring	Headbox Pipeline Pond	100 Yrds.	Evans Spring Sec. 33, T33S, R7W	1979	
Slide Spring	Headbox Pipeline/Trough		Slide Spring Sec. 3, T34S, R7W		
Kelleys Spring	Headbox Pipeline	20' Ring	Kelley Spring Sec. 24, T32S, R6 1/2W	1996	
East Quarry Pond	Reservoir		Sec. 5, T32S, R6W	1986	

TABLE IV
RED CREEK CATTLE ALLOTMENT
STRUCTURAL RANGE IMPROVEMENTS

NAME	TYPE	SIZE	LOCATION	CONSTRUCTED	REMARKS
<u>Fences</u>					
Red Creek Forest Boundary	Barbed Wire	18 mi.	Red Creek to Bear Valley and Sandy Creek	1939	
Red Creek Little Valley Common Boundary	Log	2 mi.	Caddy Creek	1933	Recons.
Red Creek Division	Barbed Wire	.25 mi.	East of Abbott Ranch	1965	
Red Creek Division	Barbed Wire	2.50 mi.	Slide Trough to Round Meadows	1957	
Red Creek Division	Barbed Wire	1.0 mi.	Bear Valley G.S. West to Ledge's	1977	
Ashman Division	Barbed Wire	2.0 mi.	Ashman Draw West to Ledges Near Rock Quarry		
Red Creek Division	Barbed Wire	1.25 mi.	Between Blowup and Williamson Ranch		
Halterman Division	Barbed Wire	1.25 mi.	Aurthor Evans P.L. to Blowup/Williamson Fence		
Cottonwood Drift	Barbed Wire	.25 mi.	Across Road at Head of Cottonwood Circle	1976	
Willow Drift	Barbed Wire	.25 mi.	In Narrows Near Head of Willow Creek	1982	
Bear Valley Division	Barbed Wire	.5 mi.	Bear Valley G.S. to Alma Evans Pasture		
Cottonwood Narrows	Barbed Wire	.75 mi.	FS Boundary in Buckskin to Ledges in Cottonwood Narrows		
Bear Valley Riparian	Barbed Wire	.5 mi.	Both sides of Bear Creek Riparian	1995-96	
Little Creek Riparian	Electric Fence & Barbed Wire	.75 mi.	North side of Little Creek Sec. 4&9, T34S, R7W	1994	
Blowup Division	Barbed Wire	1.0 mi.	Sec. 19, T34S, R7W	1998	Recons.