

HICKS-PIKES PEAK ALLOTMENT MANAGEMENT PLAN

Prepared by: Karol Braddock . 8-17-92
for SUE KOZACEK/DAYLE R. FLANIGAN/JOANN C. ECKLEY Date

Accepted by: Hollis L. Smith . 8-17-92
H/ & E RANCH, INC., Permittee Date

Submitted by: Larry Widner . 8-17-92
LARRY P. WIDNER, District Ranger Date

Approved by: James L. Kimball . 10-26-92
Jr JAMES L. KIMBALL, Forest Supervisor Date

I. DESCRIPTION

The Hicks-Pikes Peak Allotment is located on the north-central edge of the Globe Ranger District, Tonto National Forest. The Salt River follows the northern boundary of most of this allotment. Vegetation includes areas of Sonoran desert scrub, semi-desert grassland, interior chaparral, and scattered areas of pinyon-juniper woodland.

The majority of the allotment lies in Management Unit 2F. In this unit, the Tonto National Forest Land and Resource Management Plan (LRMP) emphasizes management for a variety of renewable natural resources with primary emphasis of wildlife habitat improvement, water quality maintenance, livestock forage production, and dispersed recreation (page 85 LRMP).

Approximately 19% of the allotment is within the Salt River Canyon Wilderness Management Unit 2B. Management in this unit emphasizes the preservation of naturally occurring flora, fauna, esthetics, and ecological processes while providing a very high quality whitewater river-running experience, giving special consideration to nesting bald eagle home range requirements, protecting the watershed, maintaining or improving water quality, and conducting other activities, such as range management, so as to minimize impacts on wilderness characteristics (page 76 LRMP).

A. Permitted Numbers and Stocking

Permitted numbers on the Hicks-Pikes Peak Allotment have ranged from 1,420 CYL plus NI in 1929 to the recent stocking of 1,000 CYL plus NI. Under the Memorandum of Understanding that was drafted in 1991 along with this AMP, 150-head nonuse drops the stocking level to 850 head.

In the past, actual use has varied from the permitted numbers. It was believed that at one time there were approximately 3,000 head of cattle being run on the allotment. In 1929, numbers were down to around 600 head due to a drought and the poor condition of the forage resource. Actual stocking in 1987 was 729 cows and bulls plus 341 yearlings.

The permittee understands the allotment is in need of resource improvement. It is agreed this may be accomplished best by adjusting the amount of grazing pressure and implementing improved management. The Memorandum of Understanding referred to above will decrease stocking by 150 head and will have four resolution dates. The resolution dates will correlate to completion of development phases outlined later. Projected dates are December 1993, December 1996, June 1999, and June 2005. However, if the development schedule is changed, resolution dates will also change. A 3-year minimum and 6-year maximum implementation of a phase is required for resolution. It is the desire of the Forest Service and permittee to resolve stocking rates at earlier dates; however, due to budget constraints of the permittee, the above dates are projected.

B. Type of Operation and Animal Husbandry

At present, the cow herd is managed as a cow/calf/yearling operation. Calves are carried over as natural increase and sold as yearlings. Bulls are grazed with cows yearlong. There are some small pastures north of the headquarters that received sporadic rest, and the Pinal Pasture is normally saved for use during the spring by yearlings as they are gathered prior to sale in May. Upon implementation of the AMP, the cow herd will be managed as a cow/calf operation. All yearlings (NI) will graze in the Pinal Pasture or be removed from the allotment. The allotment will be divided into several pastures to facilitate improvement of resources and animal husbandry.

C. Problems and Conflicts

Carrying capacity is limited by existing water facilities. Two factors that contribute to this are actual locations of water, plus volume of water in individual pastures, which is insufficient to accommodate the entire herd. To remedy this situation, new water developments will be constructed and numerous developments will be reconstructed.

Distribution is also a problem because of the steep terrain and variations in vegetation types. At present, bottoms and open grassland receive the brunt of grazing pressure. Development of additional waters and fences, coupled with a rotation scheme, will improve livestock distribution.

II. GOALS

A. Long-term Goals for Hicks-Pikes Peak Allotment

1. Realize the forage production potential of the land.
2. Increase the production of palatable forage, which is available for wildlife and livestock use.
3. Improve and maintain a multi-layered wildlife habitat, including riparian habitat, along drainages and adjacent to springs, seeps, and water courses.
4. Improve watershed conditions through increased plant density, litter accumulations, and reduction of soil compaction.
5. Maintain and/or improve visual quality.

B. Short-range Objectives Serving to Accomplish Long-range Goals

1. Provide rest to uplands and riparian areas during critical plant growth periods by intensifying the current management through a rest-rotation grazing system.
2. Allow plants to meet their physiological growth requirements through a rest-rotation management system.
3. Limit utilization of key species to 60% in key areas with sideoats gramma identified as the key species.
4. Limit utilization of key browse species to 60%; ceanothus and mountain mohogany are considered key browse on the allotment.
5. Improve livestock grazing patterns by developing additional waters, improving salting techniques, and confining livestock to pastures for a specified period of time.
6. Improve composition, plant diversity, and ground cover through a rest-rotation management system and improved livestock distribution.
7. Achieve riparian utilization levels (summed over a full grazing cycle) that allow the opportunity for seedlings to become established and a variety of age groups to exist.

III. MANAGEMENT SYSTEMS

Due to the size of the allotment, the livestock will be separated into four herds and the allotment will be divided into four primary management units. Each unit will have three or more pastures to provide two out of three back-to-back growing seasons of rest.

The units, initial stocking, and pastures are as follows:

A. Westside - 270 head of cattle

- | | |
|------------|-------------------|
| 1. Hicks | 5. Mark ✓ |
| 2. Lloyd | 6. Holly ✓ |
| 3. Roy ✓ | 7. Yellow |
| 4. Kenny ✓ | 8. Lower Devore ✓ |

B. Shute Spring/Redmond - 241 head of cattle

1. Shute Spring
- ~~2. Lower Shute~~
3. Redmond/Redmond Flats

C. Box - 105 head of cattle

1. #1
2. #2
3. #3

D. Horseshoe Bend - 206 head of cattle

1. Sycamore
2. Laines
3. Ortega
4. Hope

In addition to these main units, the Pinal Pasture Unit will be used each spring for yearling carryover on the allotment; however, if no yearlings are carried on the permit, selected animals may graze the unit during the period 1/1 - 5/31. The Big Pasture Unit will be managed for 28 bulls and selected animals under a two-pasture, alternating use system (flip-flop), with the understanding that in the future, a portion of the Pinal Pasture Unit and private lands may be incorporated to provide a unit with four pastures. The unit may be grazed on a yearlong or seasonal basis. If private land is used, capacity of the land will be determined, a term private land permit issued, and the numbers for the unit adjusted accordingly. Another option would be to incorporate the Big Pasture Unit into the Box Unit.

The enclosed rotation schemes (R3-2200-19) illustrate planned rotations and moving dates. These will serve as a guide, are flexible, and will need to be adjusted as capacities for each pasture are determined. The flexibility of the rotation schemes may not include the use of a pasture at the same time of year during consecutive years.

A period of about 10 years is anticipated before all the proposed rotations can be fully implemented. This lag is necessary to allow construction of improvements.

The allotment will be developed in phases. Since pasture fences are already in place in the Westside Unit, only two water systems (Granite Pipeline and Hicks Spring) need to be up-graded before the rotation can be implemented in this unit. It is expected that this work will be completed during the fall of 1992. Work will be completed on the remaining units as follows:

Phase 1 will be the development of the Horseshoe Bend Unit into at least a four-pasture system.

Phase 2 will be development of the Shute and Redmond Pastures into a unit with minimum of a three-pasture rotation scheme and necessary water developments.

1971

[Handwritten notes and signatures]
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*1971
Phase 2 units
D. Horseshoe Bend - 1971*

Phase 3 will consist of fences and waters in the Box Pasture to provide a unit with a minimum of a three-pasture rotation scheme.

Even though phases are shown as 1, 2, and 3, it may be decided to switch priorities at a later date.

Once initial development of a phase is complete, the Forest Service and H&E Ranch, Inc. will decide if further development is more advantageous in that unit or if the next phase should be initiated. Any development phase may be altered from the described schedule if both the Forest Service and the permittee agree on the proposed change.

Two of the units include part of the Salt River Canyon Wilderness (see map). As directed by the Tonto LRMP, the Wilderness areas will be managed at Level B. Two of the three pastures in the Shute Spring/Redmond Unit will contain wilderness acres; the same will be true for two of the four pastures in the Horseshoe Bend Unit. The tentative rotation planned for these units, and the periods during which livestock will be present in the wilderness, is shown on the rotation schedule (R3-2200-19).

With the implementation of rotational management, livestock use in the wilderness will be changed from continuous yearlong grazing to short periods of use. Once livestock have used a pasture during a scheduled rotation, they will usually not be back in that pasture during the same season for another 3 years.

The attached R3-2200-19 forms show the various rotation schemes, which as mentioned earlier, serve as a guideline and are meant to be flexible to meet changing situations and needs. Such changes will be worked out between the permittee and the Forest Service.

IV. RANGE IMPROVEMENT DEVELOPMENT

The planned improvements are listed below by herd unit. The dates shown are projected and may change. The locations shown on the enclosed maps are general guidelines. Before the construction of individual projects, on-the-ground reviews will be completed to ensure that the analyses in the BE and EA are still valid.

Even though specific grazing units will be developed in different phases, certain wells, springs, and fences may be constructed in units during a time when development is not concentrated on that unit. This will reduce contract costs and planning periods. As outlined in the management agreement, plans for range improvement work could begin at the time the management agreement was approved on 10/8/87.

A. Westside Unit

<u>Projected Year</u>	<u>Range Improvement</u>	<u>Estimated Costs FS Permittee</u>	<u>Responsibility</u>
88	DeVore Well Storage & Pipeline	All	Permittee to Purchase Materials & Construct
88	39 Spring Pipeline	All	Permittee to Purchase Materials & Construct
88	Main Division Fence	24,000	Permittee to Purchase Materials & Construct
88	Moonshine Pipeline	15,000	Permittee to Purchase Materials & Construct
90 - 91	Rip & Holly Division Fence	33,000	Permittee to Purchase Materials & Construct
92	Hicks Spring	1,500	Permittee to Purchase Materials & Construct
92	Granite Pipeline/Storage	All	Permittee to Purchase Materials & Construct

B. Horseshoe Unit

<u>Projected Year</u>	<u>Range Improvement</u>	<u>Estimated Costs FS Permittee</u>	<u>Responsibility</u>
	Apache Windmill	10,000	Permittee to Purchase Materials & Construct
	Horseshoe Unit Pipelines	3,000	Permittee to Purchase Materials & Construct
	Sycamore, Hope/Laines Fence	36,000	Permittee to Purchase Materials & Construct
	Little Mud Cattle Guard	3,500	FS to Purchase & Install
	Ortega/Hope Division Fence } <i>porch</i>	33,000	Permittee to Purchase Materials & Construct
	Sycamore/Hope Division Fence	24,000	Permittee to Purchase Materials & Construct

C. Shute/Redmond Unit

<u>Projected Year</u>	<u>Range Improvement</u>	<u>Estimated Costs FS Permittee</u>	<u>Responsibility</u>
	Shute/Redmond Division Fence	24,000	Permittee to Purchase Materials & Construct
	Shute Pipeline	3,000	Permittee to Purchase Materials & Construct
	Agua Pipeline	2,000	Permittee to Purchase Materials & Construct
	Cold Water	3,500	FS to Purchase & Install

D. Box Unit

<u>Projected Year</u>	<u>Range Improvement</u>	<u>Estimated Costs FS Permittee</u>	<u>Responsibility</u>
	Roys Well	10,000	Permittee to Purchase Materials & Construct
	Redmond Rd. Cattleguard	3,500	FS to Purchase & Install
	Middle Division Fence	18,000	Permittee to Purchase Materials & Construct
	Box Division Fence	19,000	Permittee to Purchase Materials & Construct
	Box Cattle Guard	3,500	FS to Purchase & Install

The Sycamore Spring Water Development, which is located within Laines Pasture in the Horseshoe Bend Unit, has received particular management attention because of the introduction there of gila topminnow in 1982. These fish were placed in the cement livestock trough, and were later found in the small dirt tank below the trough that is fed by its overflow. With the approval of the BE and EA which support this AMP, a fence will be constructed around the cement trough and dirt tank to exclude livestock. This action will be possible because water can still be provided to livestock using another branch of the Sycamore Spring Pipeline, which supplies water to a holding corral a few hundred feet below the topminnow site. There are no plans at this time to try to use water from Sycamore Spring to supply livestock in any of the other Horseshoe Bend Unit pastures besides Laines.

V. DISTRIBUTION AIDS

Improved livestock distribution is essential to accomplish established objectives. Some of the more apparent techniques, which will aid in distribution, include the following:

Water Facilities - Construction of new water developments and the expansion of existing developments will aid distribution by enabling livestock to graze greater distance from existing waters.

Salting Techniques - Proper placement of salt will enhance distribution of livestock. Salting areas should be selected jointly by the permittee and range conservationist. All salt should be located away from water and heavily used areas. Salt locations should be changed periodically.

Livestock-Proof Fences - In an effort to contain livestock within the specific unit and meet the objective of improved distribution, fences will be constructed and maintained in a manner that allows them to effectively control livestock.

VI. MAINTENANCE OF IMPROVEMENTS

All improvements, listed as maintenance responsibilities under the terms of the permit, should be maintained throughout the life of this plan.

Each improvement should be in a workable condition when livestock enter a fresh unit.

Specific improvements needing maintenance will be identified in the annual operating plan.

VII. FOLLOWUP

A. Annual Operating Plan

On a yearly basis, the annual operating plan will be prepared jointly by permittee and Forest Service. This plan should address the following items:

1. Rotation Schedules - Planned rotation should be based on grazing systems (R3-2200-19) contained in this plan, subject to modification.

2. Salting Techniques - Specify locations or areas where salt should or should not be placed.

3. Range Improvement Maintenance - Specify type of maintenance needed and follow-up.

4. Range Improvement Construction - Identify what improvements are planned and identify time frame for construction by responsible party.

5. Livestock Accountability - Specify the method by which livestock numbers and tag numbers on the allotment will be confirmed annually.

6. Range Inspections - Identify specific inspections which will be conducted to monitor utilization levels, livestock numbers, salting techniques, and compliance with permit terms and conditions.

B. Monitoring

The purpose of monitoring is to determine if progress is being made in moving toward long-range goals through meeting short-term objectives. The need for amending this plan can only be determined through close supervision. Monitoring and close coordination with the permittee are the keys to effective evaluation of this plan.

General allotment inspections will be made throughout the year to note pasture rotation, improvement maintenance, salting techniques, distribution patterns, and general rainfall patterns. These inspections will also insure that pastures are receiving scheduled rest and that the system is working for the permittee and improving the resources. These observations will be documented in the allotment file and discussed with the permittee.

A minimum of 2 years of production-utilization surveys for each unit will be conducted, beginning no earlier than the third year of complete implementation of a phase in order to: (1) determine if established utilization objectives are being met; (2) determine if the unit can sustain the current numbers; and (3) explore the opportunity for increased capacity and the resolution of the nonuse agreement. Surveys should be conducted (preferably in the company of the permittee) as soon as possible after livestock are moved out of a unit.

Existing Parker three-step clusters were reread in 1985. Wherever these studies exist on the allotment, they will be read on 10- to 15-year intervals. It is important to continue to read these to maintain continuity of data over the years.

In addition to the Parker three-steps, new frequency transects with permanent photo points will be established on the allotment to monitor trend of the uplands. If the Parker three-steps are still in key areas, these frequency transects will be set up in the same area and will be read in 5-year intervals.

Riparian areas will be monitored in two intensities. Two intensive monitoring sites have been established to date: one in Devore Wash, in the Westside Unit, and one in Sycamore Canyon, in the Horseshoe Bend Unit. Baseline data was collected in 1992, following Level II riparian monitoring protocol. These studies should be re-read at 5-year intervals.

Photo points will be established within representative riparian areas for all four units of the allotment. A photo point study was established in 1992 in Sycamore Canyon for the Horseshoe Bend Unit and baseline photos were taken. At a minimum, photos will be retaken at 3 year intervals. However, it is hoped that by taking advantage of interested volunteers, these photo points could be retaken on a yearly basis.

The analysis of data from riparian monitoring will determine if a positive response in condition has occurred. A positive response is the occurrence of woody and herbaceous plants with more than one age class and increasing species composition and density of wetland plants. Lack of such a response, unless due to drought or flooding, will require a change in allotment management or livestock numbers.

Production/utilization studies and riparian monitoring will be used together to determine any change in the management or livestock numbers for each unit.

Maximum stocking during the first resolution period (1990 through 1993) will equate to 850 CYL plus NI. NI will graze in the Pinal Pasture or be removed from the allotment. Stocking during the three final resolution periods is dependant upon data collected, as outlined in allotment management plan, in the prior period(s). Example: If data collected in the Westside Unit shows the stocking rate is proper, at the end of the first resolution period (1993), stocking for the allotment will remain at 850 CYL; if data for the Westside Unit shows it can only sustain 250 head (versus 270 originally), the unit will be stocked at 250 head and stocking for the allotment will be 830 head until the next resolution date; if data shows the Westside Unit can sustain 290 head, stocking for the allotment will be 870 head until the next resolution date. The Forest Service and permittee may agree to intensify management in a unit and, thereby, extend the resolution date. This concept will continue until all desired management implementation and resolution dates are met.

AUM figures will be determined for each unit. Maintaining accurate actual-use records will be important for resolution purposes and as a part of the continued allotment monitoring process.

Stocking for each unit, based on the presently perceived obtainable management, is listed below. This is a maximum stocking for each unit prior to implementation and resolution for the unit. These fixed herd numbers will be followed until the carrying capacity of the allotment has been determined, after which time the flexibility to adjust herd numbers will be possible.

<u>Management Unit</u>	<u>Number of Cattle</u>	<u>Suitable Acre/AUM</u>	<u>Suitable Acres</u>	<u>AUM's</u>
Westside	270	4.0	12,980	3,245
Box	105	4.0	5,057	1,264
Shute Spring/Redmond	241	4.0	11,581	2,895
Big	28	6.0	2,004	334
Horseshoe Bend	<u>206</u>	6.6	<u>16,425</u>	<u>2,488</u>
Totals	850		*48,047	10,226

*Does not include Pinal Pasture