

DECISION NOTICE  
and  
FINDING OF NO SIGNIFICANT IMPACT

MANAGEMENT OF THE  
SUPERSTITION GRAZING  
ALLOTMENT

U.S.D.A. FOREST SERVICE  
TONTO NATIONAL FOREST  
MESA RANGER DISTRICT  
MARICOPA AND PINAL COUNTIES,  
ARIZONA

An environmental assessment that discusses the alternatives for management of the Superstition Grazing Allotment is available for public review at the Mesa Ranger District Office in Mesa, Arizona or at the Tonto National Forest Supervisor's Office in Phoenix, Arizona.

It is my decision to adopt alternative D which will reduce the permitted number of Livestock on the allotment to 150 head yearlong plus N.I.. This alternative also establishes a system of management for the allotment.

In addition to the proposed alternative, three other alternatives were evaluated.

(A.) No action

(B.) Reduce the livestock numbers to the level indicated by the production-utilization studies for current management.

(C.) Convert to a yearling grazing operation.

Alternative C (conversion to a yearling grazing operation) and the proposed alternative would both meet the objectives for management as outlined in the environmental assessment. The proposed alternative was adopted because the permittees prefer the continuation of a yearlong cow-calf operation even though there is a contingent permit reduction.

I have determined, based on the environmental analysis, that this is not a major federal action that would significantly affect the quality of the human environment. Therefore, an environmental impact statement is not needed. This determination was made considering the following factors;

(A.) The objectives for management of the Superstition allotment as outlined in the Environmental Assessment.

(B.) There are no significant irreversible resource commitments.

(C.) There are no apparent adverse Cumulative or Secondary effects.

(D.) The physical and biological effects are limited to the area of planned management.

(E.) No known threatened or endangered plants or animals would be adversely affected by this proposal.

This decision is subject to administrative review pursuant to 36 CFR 211.19. Allotment management planning may begin immediately following signing of this decision notice.

4/23/85

DATE

Charles C. Wilder

for JAMES L. KIMBALL  
Forest Supervisor

U.S. Department of Agriculture  
Forest Service

Tonto National Forest  
Mesa Ranger District

Environmental Assessment  
Management of Superstition Grazing Allotment

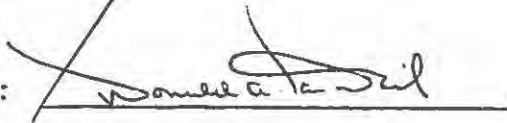
Prepared by:



Date:

12-17-84

Reviewed by:



Date:

12/19/84

## I. INTRODUCTION AND NEED FOR THE PROPOSED ACTION

Continuous yearlong grazing of livestock and poor distribution have resulted in overuse and degradation of the forage resource at and adjacent to sources of perennial water (key areas) within the Superstition grazing allotment. Available resource study data indicates that the allotment will not support the permitted number of livestock under current management without continued resource damage. This report will discuss the various management alternatives available to correct this problem and outline the affects of implementing each of the alternatives.

The objectives for management of the Superstition Allotment considered in this evaluation process are as follows:

- A. Reversal of the downward trend of the vegetation resource at and adjacent to perennial water sources (key areas).
- B. Maintaining a viable grazing operation on the allotment.
- C. Reduction of the conflict between recreational users and livestock.
- D. Protection of wilderness values during the construction of any new structural improvements and the reconstruction and maintenance of existing improvements.
- E. Improvement in the condition of riparian communities within the allotment.
- F. Reduction of wildlife and livestock conflicts.

Range allotment analysis was completed on the allotment in 1982. Three production-utilization studies have been completed and approved for 1979, 1980, and 1981. Analysis information for the allotment includes:

### 1979 Production-Utilization Study

- Stocking rate	3,020 AUM's
- Estimated capacity current management	1,850 AUM's
- Needed downward adjustment current management	1,305 AUM's
- Total acres utilized	15,459 Acres

Of the total, 3,071 acres of key area provided 41% of the forage consumed.

### 1980 Production-Utilization Study

- Stocking rate	3,161 AUM's
- Estimated capacity current management	1,199 AUM's
- Needed downward adjustment current management	1,956 AUM's
- Total acres utilized	10,574 Acres

Of the total, 3,348 acres of key area provided 58% of the forage consumed.

1981 Production-Utilization Study

- Stocking rate	2,880 AUM's
- Estimated capacity current management	1,169 AUM's
- Needed downward adjustment current management	1,986 AUM's
- Total acres utilized	10,541 Acres

Of the total, 4,138 acres of key area provided 39% of the forage consumed.

Condition and Trend Data Summary  
Permanent Trend Transects

<u>Cluster</u>	<u>Vegetation</u>			<u>Soil</u>		
	<u>1953,54</u>	<u>1971,72</u>	<u>1979,80</u>	<u>1953,54</u>	<u>1971,72</u>	<u>1979,80</u>
1	Poor →	Poor ↑	VPoor ↓	Fair →	Poor ↑	Poor ↓
2	Fair →		Poor ↓	Good →		Poor ↓
3	Fair →		Poor →	Good →		Fair →
4	Fair →	Poor ↑	Poor ↓	Fair →	Poor ↑	Poor ↓

The 1982 analysis shows 35,209 acres as full capacity range and 22,575 as no capacity range. Of the 35,209 acres of full capacity range, 135 acres were classified as good, 2,231 acres as fair, 17,543 acres as poor, and 15,300 acres as very poor.

Twenty-two pace transects were recorded during 1980 as part of the analysis process. Summary of the pace transects is as follows:

	<u>Vegetation</u>	<u>Soil</u>
	P1	Fair →
	P2	Fair →
	P3	Poor →
	P4	Very poor →
	P5	Fair ↓
	P6	Poor →
	P7	Fair →
	P8	Fair ↑
Key area	P9	Fair →
Key area	P10	Poor ↓
Key area	P11	Very poor ↓
Key area	P12	Poor ↓
	P13	Fair ↑
	P14	Fair →
	P15	Poor ↓
	P16	Poor ↓
	P17	Fair →
	P18	Fair →
	P19	Poor ↓
Key area	P20	Poor ↓
Key area	P21	Poor ↓
	P22	Poor ↓

These studies show a downward trend for the vegetation resource in the key areas. These key areas correspond with permanent water sources and receive yearlong concentrations of livestock.

## II. AFFECTED ENVIRONMENT

### A. Location, Size, Ownership, and Status

The Superstition Allotment is located on the southern end of the Tonto National Forest and Mesa Ranger District. It is bordered on the south and southwest by private and State land, on the northwest by the Goldfield Allotment, on the north by the Sunflower Allotment, and on the east by the Tortilla and Millsite Allotments. The allotment area is entirely National Forest system land. Total acreage is 57,784 acres of which 35,209 have been classified as full capacity range. The remaining 22,575 acres are all classified as no allowable capacity. Production-utilization studies conducted during 1979, 1980, and 1981 have shown an average of 12,000 acres of the total receiving a recordable amount of livestock use.

Approximately 85% of the allotment is included in the Superstition Wilderness.

### B. Topography and Soils

The allotment varies in elevation from 1,600 feet above sea level at Canyon Lake to 5,057 feet on the top of Superstition Mountain.

The Superstition Mountains are part of a typical volcanic cauldron complex. Important geologic features of the area include the resurgent central dome of the Superstition Mountain, the subsequent cauldron of Black Mesa, the ring fracture zone of closely-spaced antithetic fault blocks, the inner ring of early dacite centers, the outer ring of late silicic domes, and the peripheral flat-lying volcanic plateau of rhyolitic breccias. These features present an extremely rugged landscape with many vertical bluffs and talus slopes.

A Soils Resource Inventory for the allotment is available at the Mesa Ranger District office and the Tonto National Forest Supervisor's Office.

### C. Water

Water quantity and quality within the allotment are extremely variable, depending on the season of the year and the weather patterns within a given year.

During the hot summer and fall months, surface water is available at only a few scattered springs and stock tanks (except during occasional thunderstorms) and water quality is poor with many of the water sources becoming stagnated.

With normal winter and spring precipitation patterns, most larger drainages run water and water quality improves.

#### D. Wildlife

Many wildlife species occur within the allotment. A species list compiled for the Alcheyay Project Study Area, which is north and east of the allotment but includes the same biotic communities, lists 73 species of mammals, 286 species of birds (resident and migratory), 67 species of reptiles and amphibians, and 24 species of fish as occurring or possibly occurring within the study area. Although this is a wash list of all possibilities, it gives an indication of how complex and varied the wildlife community is in this area.

A wildlife habitat evaluation for the allotment is included in the Appendix.

#### E. Vegetation

Vegetation within the allotment is characteristic of the Arizona Upland Subdivision of the Sonoran Desertscrub Biotic Community (Brown and Lowe, 1980). Scattered plants associated with the Interior Chaparral Biotic Community can be found mixed with the Desertscrub at the higher elevations. Various local communities include the creosotebush-bursage community, mixed palo verde-cactus community, desertscrub grassland community, and several Riparian communities. Important browse forage plants on the allotment include: jojoba, ratany, ephedra, mendora, mahogany, false mesquite, mesquite, holleyleaf buckthorn, and desert ceanothus. Important grass forage plants include: curleyesquite, sideoats grama, hairy grama, plains lovegrass, sprangletop, and bluestem.

Annual grasses and forbs may provide considerable forage during the spring of the year, but this annual production fluctuates with yearly weather patterns. The most common annual plants include: red brome, fox-tail, indian wheat, filaree, fiddleneck, goldentop, and schismus.

#### F. Climate

The climate in the allotment area is characterized by very hot summers (110°F +), mild falls and springs, and cool winters. Local variations occur due to differences in altitude and aspect. Annual precipitation averages 13 inches (Mormon Flat recording station). Approximately 60% of this yearly total occurs between October and April. These storms are usually from one to three days in duration and gentle. At higher elevations a small percentage of this precipitation occurs as snow. The remaining 40% of the yearly precipitation occurs between May and September. May and June are usually the driest months with July, August, and September receiving most of the summer precipitation. This precipitation occurs during high intensity short duration storms resulting from warm moist air moving into Arizona from the Gulf of Mexico.

### G. Recreation

The Superstition Allotment is approximately 85% designated wilderness area and includes all of what is referred to as the west end of the Superstition Wilderness. Recreation use in this part of the Superstition Wilderness is heavy during all but the hottest months of the year, with several thousand people using the trailheads on the busier weekends. The limited permanent waters and the desirability of these areas for campsites result in recreation user-livestock conflicts.

Cattle utilize the south shore of Canyon Lake east of Boulder Creek plus the area around Tortilla Flat. This livestock use frequently conflicts with recreational users especially on the beach areas. Future plans call for fencing livestock from this area.

### H. Livestock

Kevin and Brenda Lamb are permitted to graze 200 cattle yearlong plus their natural increase (yearlings) from January 1 until May 31.

Since acquiring the permit in 1979, the present permittees have made no attempt to manage livestock on the allotment. Examples of this lack of management include:

1. Many of the structural range improvements have not been maintained and are nonfunctional.
2. Salt has been utilized on only a few occasions and was concentrated in heavily used areas adjacent to water at those times.
3. There has been no attempt to take advantage of seasonal variations in water availability utilizing livestock herding.

This lack of management is illustrated in the production-utilization studies which show the capacity for this allotment under current management to be 1,184 AUM's, or 67 cattle yearlong plus N.I. By employing the necessary management techniques, the production-utilization studies indicate that the allotment could support approximately 150 cattle yearlong plus N.I. This number is 25% less than the present permit.

The present permittees are involved in a voluntary foreclosure action with Farmer's Home Administration involving the base property for the grazing permit. Because of this action, the permit has been in total nonuse for the last two years. It is anticipated that the foreclosure action will result in waiver of the permit by the Lamb's.

## III. ALTERNATIVES CONSIDERED

A. No Action - Continue the present livestock operation on the allotment.



The present 200 head yearlong operation would be continued with no attempt to improve distribution or provide rest for the forage resource.

B. Reduce livestock numbers to the level indicated by the production-utilization studies for current management.

The 1980 and 1981 production-utilization studies are considered the most indicative of current management on the allotment. Capacity calculated as an average of these two studies is 1,184 AUM's. The permit for the allotment would be adjusted to this level.

C. Convert to a yearling grazing operation. The 2,400 AUM's presently permitted for the cow-calf operation plus the 755 yearling months for the five month natural increase season would be converted as follows:

<u>Yearlings (9 to 18 months)</u>		
	<u>Weight Class at Entry</u>	<u>Number of Animals Grazed</u>
6 Month Season	300-450 lbs.	853
	500-600 lbs.	697
	650-800 lbs.	731
7 Month Season	300-450 lbs.	731
	500-600 lbs.	598
	650-800 lbs.	565

(The full permit numbers would be retained, assuming improved distribution combined with less than yearlong use.)

Structural improvements necessary for implementation of this system include:

Construction - 1 dug well and water lot

Reconstruction - 2 spring developments  
3 corrals  
4 miles of fence

Yearlings would be on the allotment from November 1 each year until the end of April or the end of May depending on the season. Livestock would not be on the allotment during the critical growth period for the warm season growers.

Included as additional information for Alternative C are the following:

1. An allotment map showing the proposed improvement construction, reconstruction, and maintenance.

2. An economic analysis showing the cost/benefit ratio, environmental quality benefit rating and social well-being analysis.

D. Initiate a management system of scheduled rest and rotation. The grazing permit for the allotment would be reduced to 150 head plus natural increase.

A one-herd, three pasture, rest-rotation system would be utilized with two livestock moves each year in conjunction with normal spring and fall roundups.

Structural improvements necessary for implementation of this system would include:

Construction - 1 dug well and water lot  
1½ miles of fence

Reconstruction - 2 spring developments  
3 corrals  
4½ miles of fence

Included as additional information for Alternative D are the following:

1. An allotment map showing the proposed pastures and improvement construction, reconstruction, and maintenance.

2. Form 2200-18 showing the proposed rotation schedule.

3. An economic analysis showing the cost/benefit ratio, environmental quality benefit rating, and social well-being analysis.

4. Allowable use calculations from the 1980 production-utilization study showing adjustments that would be required by Alternative D (refer to the production-utilization map for areas that correspond to the numbers in column 1).