

**PROPOSED ACTION  
GRAZING MANAGEMENT  
FOR THE TWIN TANKS GRAZING ALLOTMENT  
April 2008**

**Introduction**

The Williams Ranger District of the Kaibab National Forest is proposing to re-authorize sheep grazing on the Twin Tanks Allotment (see Maps 1 and 2). Grasslands, pinyon/juniper and ponderosa pine dominate the vegetation on the Twin Tanks Allotment at an elevation ranging from 6,400 to 9,300 feet.

The allotment has 11,940 Forest Service acres. Allotment management follows a deferred rotation grazing system, which is managed by a herder with typically one band of sheep. Current permitted use for the allotment allows up to 1025 head of sheep from 5/21-10/20 and 30 head of rams from 6/11-7/11, which are 1037 Animal Unit Months (AUM's) and 5187 Head Months (HM's).

The Twin Tanks Allotment is located approximately seven miles northeast of Williams, Arizona, approximately two miles northeast of Red Lake Valley, and approximately two miles west of Spring Valley (Map 1). The allotment runs from Cedar Mountain on the west side to Sitgreaves Mountain on the southeast corner. The allotment is located in all or in parts of T23N, R4E, Sections 6-7, 18-19, and 30; and T23N R3E, Sections 1-18, 22-27.

**History, Existing and Desired Conditions**

From the early 1900's to 1961, this allotment was originally part of the Williams Community Allotment. The Allotment had up to 7861 sheep with up to three different sheep permittees, up to 100 head of cattle, and homesteaders also had their local livestock on the allotment area. Livestock numbers were reduced throughout this time period.

In 1961, the Williams Allotment was divided into the Boulin and Homestead Allotments to separate portions of the allotment into cattle and sheep allotments. The Homestead Cattle Allotment was created by combining the old Hardy Allotment with the southern portion of the old Williams Allotment. The Boulin Sheep Allotment was created with the remainder of the Williams Allotment. 4,100 sheep were permitted to graze from 5/1 – 10/20. Three permittees grazed the Boulin Allotment until 1967.

In 1967, the Boulin Allotment was divided into the Twin Tanks, Cowboy and Squaw Mountain Allotments. Twin Tanks was the southern most portion of this allotment area. Twin Tanks Allotment was established at the current grazing capacity of 1025 sheep from 5/21-10/20 and 30 rams from 6/11-7/11. No fencing separates the three allotments. The sheep are controlled by herding. The current permittee has held permits on all three of these Allotments since 1987.

Our records show no utilization over the 35 percent guideline established for the allotment (1987 Allotment Management Plan).

The allotment is primarily juniper grassland on the west half on the allotment and transitions to ponderosa pine on the east half of the allotment. The topography is flat to steep with Cedar Mountain, Wildcat Hill, Little Squaw Mountain, and Sitgreaves Mountains scattered within the allotment area. Small intermittent drainages occur throughout the allotment but no riparian vegetation or hydric soils are present. These drainages run during snow melt and heavy monsoon storms.

Blue grama and bottlebrush squirreltail are the primary grassland species on the allotment.

Permitted sheep numbers, under the current grazing management system, fall within the carrying capacity of the allotment. Carrying capacity for this analysis is based on: actual use data, condition and trend monitoring, sheep and wildlife use patterns, sheep health and condition, soil surveys (Terrestrial Ecosystem Survey), forage production estimates, and professional opinion.

The trend for Twin Tanks Allotment is generally static and stable for range and soil conditions. A reduction in cool season grass species is following trend found throughout the Forest in grazed and ungrazed areas. The cool season grass reduction is most likely caused by a decrease in winter moisture and an increase in warm season grasses.

One monitoring transects were established on the Twin Tanks Allotment in 1960. Five paced transects were done in the Fall of 2007. All monitoring sites have either a static or upward trend.

These range condition trends exist under the current sheep grazing system and within the current utilization guideline for sheep and wildlife. Grazing has remained within this utilization guideline and sheep have been able to use the area for the full length of the grazing season. Sheep must be moved early if the grazing intensity level is reached prior to planned rotations, or sheep may not enter an area if grazing intensity from wildlife already meets the grazing intensity guideline (see page 3, utilization). However, wildlife grazing has not been that high on this allotment. The current permittee has been very responsive to drought by reducing sheep use, see Table 1.

Soil condition status is obtained from the Kaibab National Forest Terrestrial Ecosystems Survey (TES) (USDA 1995). Based on TES predictions and field surveys, satisfactory, impaired, and unsatisfactory soils exist on the Twin Tanks Allotment. Of 11,938 acres on the allotment, 10,496 acres are in satisfactory soil/watershed condition (88%); 0 acres are impaired (0%); and 1,442 acres are in unsatisfactory condition (12%). This data was collected for the TES from 1979 to 1986. Range monitoring throughout the area shows soil condition have improved since the original surveys were completed, so today it is expected that the number of acres in satisfactory condition will be the same or better.

### **Purpose and Need**

The Twin Tanks Allotment is scheduled for an environmental analysis of grazing use on the Kaibab National Forest, as required by the Rescission Act (Burns Amendment 1995). This analysis is required in order to ensure sheep grazing is consistent with goals, objectives, and the standards and guidelines of the Kaibab National Forest Plan (1987, as amended).

The purpose of this project is to re-authorize sheep grazing on the Twin Tanks Allotment and to ensure the allotment is managed in a manner that maintains and/or moves the area toward Forest Plan objectives and desired conditions. Existing condition information outlined above indicates conditions on the allotment generally being maintained with current management in place. Understory species composition and ground cover is shifting as a result of climatic change, but these conditions are the same with or without the current sheep grazing. Continued monitoring will help managers to evaluate the status of maintaining and improving rangeland conditions into the future.

A management plan is in place and land management objectives under the current livestock management are shown to be meeting or moving the area toward desired conditions. Management is consistent with Forest Plan standards, guidelines, goals, and objectives.

The Twin Tanks Allotment contains lands identified as suitable for domestic livestock grazing in the Kaibab Forest Plan. Continued sheep grazing is consistent with the goals, objectives, standards, and guidelines of the Forest Plan (USDA Forest Service, 1987).

## **Proposed Action**

A Proposed Action has been developed to meet the project's purpose and need. The Proposed Action would continue current grazing management by issuing a new grazing permit and continue adaptive management and monitoring.

### Authorization

The Williams District of the Kaibab National Forest specifically proposes the following:

Reauthorize grazing on the Twin Tanks Allotment.

- The authorization would be through a term grazing permit for up to 1025 head of sheep from 5/21-10/20 and 30 head of rams from 6/11-7/11.
- The proposed permitted use is based on professional opinion, condition and trend studies completed in 2007, actual use data for the allotment for the past 20 years and the effects of this use on resource conditions. It also reflects the estimated annual forage production available for sheep on the allotment considering climate, grazing period, grazing occurrence, timing, frequency, and intensity of grazing proposed as well as proper livestock management.
- The current utilization<sup>1</sup> guideline would continue to allow up to 35 percent use by sheep and/or wildlife at the end of the sheep grazing season. This includes "conservative" grazing intensity which is measured before the end of the growing season and is used in determining when sheep need to move to the next grazing area, in consideration of other factors such as weather patterns, likelihood of plant regrowth, and previous years' utilization levels. Sheep would move to the next grazing area when grazing intensity approaches a conservative level (40%) before August 30. The grazing area would not be grazed again during the grazing season.

### Adaptive Management

- The Proposed Action includes the continued use of adaptive management, which provides more flexibility for managing sheep. Adaptive management allows the Forest Service to adjust the timing, period and occurrence of sheep grazing, movement of sheep within the allotment, and sheep numbers. If adjustments are needed, they are implemented through the Annual Operating Instructions, which would adjust numbers so sheep use is consistent with current productivity. This allows plant, soil, and watershed conditions to be maintained or improved while range improvements are implemented over time. An example of a situation that could call for adaptive management adjustments is drought.
- Adaptive management is designed to provide sufficient flexibility to adapt management to changing circumstances. If monitoring indicates that desired conditions are not being achieved, management will be modified in cooperation with the permittee. Changes may include administrative decisions such as the specific number of livestock authorized annually, specific dates of grazing, class of animal or modifications in grazing area rotations, but such change will not exceed the limits for timing, intensity, period, number, occurrence and frequency of sheep grazing defined in this Proposed Action.

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<sup>1</sup> Utilization is the proportion or degree of current year's forage production that is consumed or destroyed by animals (including insects). It is a comparison of the amount of herbage left compared with the amount of herbage produced during the year. Utilization is measured at the end of the growing season when the total annual production can be accounted for, and the effects of grazing in the whole management unit can be assessed. Utilization guidelines are intended to indicate a level of use or desired stocking rate to be achieved over a period of years.

## Monitoring

Monitoring is adaptive, and as improved methods are developed these new methods will be considered. Historic monitoring could be adapted to include these improved methods. Depending on the availability of funding, the type of monitoring and frequency for the monitoring would include:

- visual observations will be conducted on a yearly basis, which includes: permittee compliance, allotment inspections, range readiness, forage production, rangeland utilization;
- long term trend monitoring will be conducted at the historic Parker three step plot and the paced transect plots on the allotment every 5 to 10 years or as funding is available. Monitoring at the Parker three step plot currently includes the “cluster” readings, pictures and ground cover readings to estimate trend. The five paced transects monitoring was done to delineate vegetation condition classes and provide additional data on composition, vigor, cover, and soil conditions over the larger area. During the next reading of these monitoring sites: plant frequency and ground cover plots may be used to estimate trend, dry weight rank method will estimate relative species composition by weight, and species composition will be estimated by 1/10 acre canopy cover plots.

## **Other Considerations**

Kaibab Forest Plan Consistency: This action responds to the goals and objectives outlined in the 1987 Kaibab Forest Plan (Forest Plan) and all subsequent amendments, and helps maintain and/or move the project area towards desired conditions described in that plan. This project is consistent with the direction listed in the Forest-wide standards and guidelines, and in the standards and guidelines for the following Management Area (MA): MA 2 Coniferous Forest and some Coniferous Forest Woodland.

This project is also consistent with the following:

- Congressional intent to allow grazing on suitable lands (Multiple-Use Sustained-Yield Act of 1960, Forest and Rangeland Renewable Resources Planning Act of 1974, Federal Land Policy and Management Act of 1976, National Forest Management Act of 1976).
- Forest Service policy on rangeland management (FSM 2202.1, FSM 2203.1).
- Federal regulation (36 CFR 222.2 (c)) which states that National Forest System lands would be allocated for livestock grazing and these allotment management plans would be prepared consistent with land management plans, and the Clean Water Act of 1948, Clean Air Act of 1955, Endangered Species Act of 1973, and 13186 (Conservation of Migratory Birds), and National Historic Preservation Act 1966, as amended.
- Authorization of livestock grazing permits for a ten-year period is required by law (FLPMA Sec. 402 (a)&(b) (3) and 36 CFR 222.3), unless there is pending disposal, or it would be devoted to other uses prior to the end of ten years, or it would be in best interest of sound land management to specify a shorter term.

## **Decision to be Made and Timing of Decision**

The Williams District Ranger is the Responsible Official for this project and will decide whether or not to re-authorize sheep grazing and in what manner, as described in the Proposed Action, alternatives to the proposed action, or current sheep management.

The Williams District Ranger expects to issue a decision by September 2008. Implementation of the Allotment Management Plan would immediately follow the decision and close of the appeal period (if applicable). Reauthorization of sheep grazing would be for a minimum of ten years. However, future

NEPA for additional projects within the allotment, changing rangeland condition, or violations of the term grazing permit could change the length of this decision.

**Contact Person**

For more information about this proposal, contact Mike Hannemann, Range and Watershed Staff Officer for the Kaibab National Forest at (928) 635-8221, fax (928) 635-8208 or via e-mail at [mhannemann@fs.fed.us](mailto:mhannemann@fs.fed.us).

**Table 1. Twin Tanks Allotment, season of use, actual use numbers, head months, and animal unit months from 1991 to 2007.**

Year	Dates	Number (Sheep)	HM's	AUM's (0.2 AU Factor)
2007	5/21-7/14, 9/15-10/20	1025 + 30 Rams (6/11-7/11)	3064	609
2006	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
2005	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
2004	5/21-7/6	1025 + 24 Rams (6/11-7/6)	1604	321
2003	5/21-6/30	1025 + 15 Rams (6/11-6/30)	1392	278
2002	5/21-7/16	1025 + 30 Rams (6/11-7/11)	1952	390
2001	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
2000	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
1999	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
1998	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
1997	5/21-7/11	1025 + 30 Rams (6/11-7/11)	1784	357
1996	8/2-10/20	600 (8/2-9/2),1000 (9/3-10/20)	2209	442
1995	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
1994	6/2-9/25	1030 + 25 Rams (6/2-7/2)	3884	777
1993	5/21-10/20	1025 + 30 Rams (6/11-7/11)	5187	1037
1992	5/25-9/25	1030 + 25 Rams (5/25-7/25)	4250	850
1991	5/21-11/1	1025 + 30 Rams (6/11-7/11)	5592	1118

Map 1. Twin Tanks Allotment Location Map



