

BIOLOGICAL ASSESSMENT AND EVALUATION  
Anita, Cameron, and Moqui Allotments  
Tusayan Ranger District  
Kaibab National Forest  
Coconino County, Arizona  
Addendum

**PREFERRED ALTERNATIVE**

The preferred alternative is Alternative 1 as described in the Environmental Assessment (EA). The Anita, Cameron, and Moqui Allotments consist of approximately 260,415 acres within the Tusayan Ranger District, Kaibab National Forest, Coconino County, Arizona.

**SPECIES IDENTIFICATION**

**Federally Listed Species**

As disclosed in the original BA&E signed on September 24, 2004 (Project Record #73) no federally listed species will be affected by the preferred alternative. (Please see Appendix 1 for species and rationale in the September 24, 2004 BA&E).

**Sensitive Species**

The following animals and projected impacts were disclosed in the September 24, 2004 BA&E, this includes:

1. Chihuahua savannah sparrow
2. Navajo Mountain Mexican Vole
3. Northern Goshawk
4. Mojave Giant Skipper

This addendum covers disturbed rabbitbrush (*Chrysothamnus molestus*) and anticipated effects with the selection of Alternative 1.

**Disturbed Rabbitbrush** is a perennial sub-shrub with several to many stems that are frequently found in a low prostrate form and hedged due to grazing. Most colonies are found to range in size from less than 1 to 5 acres with a few colonies found between 25 and 50 acres. It is found exclusively on calcareous soils derived from Kaibab Limestone though some populations are associated with basalt parent materials, however, all the soil types are highly charged with free calcium carbonate. It is generally confined to elevations between 6,000 to 7,000 feet normally associated with the pinyon/juniper terrestrial ecosystems, big sagebrush, or the low elevation grasslands.

## **EFFECTS**

With the selection of Alternative 1 winter grazing will be discontinued within the Anita/Cameron Allotments and a rest rotation grazing system maintained. This in combination with the 50 percent reduction stocking rates on these same allotments will promote improved range conditions, increased ground covers, and higher diversity levels of plants. Galeano-Popp (1988) noted that summer grazing could have less impact than winter grazing. She also stated that a rest rotation management system would probably benefit disturbed rabbitbrush. This will ultimately enhance regeneration of disturbed rabbitbrush, since grazing by domestic livestock is eliminated during the winter period and potential impacts by these animals eliminated. This improvement will be manifested mostly in the grassland and shrub/grassland ecosystem, where disturbed rabbitbrush is found.

We anticipate that population trends of disturb rabbitbrush would increase on the Anita/Cameron Allotments and probably remain stable on the Moqui Allotment.

## **CUMULATIVE EFFECTS**

The geographical extent of this analysis includes Red Horse, Heather, Lower and Upper Cedar, and Miller Washes as well as Lee Canyon and Lower Little Colorado River basins within the Tusayan Ranger District.

Cumulatively, when direct and indirect impacts of past, present, and reasonably foreseeable actions are considered we anticipate continual improvement in habitat conditions for disturbed rabbitbrush.

With the selection of Alternative 1 the entire Tusayan Ranger District is now grazed seasonally during the summer months. The eight years of rest afforded the Rain Tank Allotment since the permit expired in 1997 has optimized not only the regeneration of disturbed rabbitbrush but other species as well. We predict Rain Tank will remain in non-use status for at least an additional five years until restoration work has been completed. We foresee that present and reasonably foreseeable actions including 6,685 acres of woodland tree removal within disturbed rabbitbrush habitat and 2,000 acres of noxious weed control over the next 10 years will enhance regeneration of this plant. This will be accomplished by providing sites for seed germination and by curtailing the threat of noxious and invasive weeds from becoming established in disturbed rabbitbrush habitat.

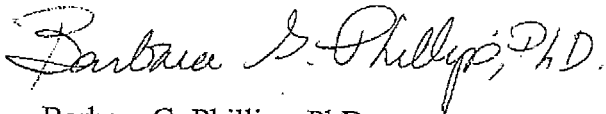
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3/2/05

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