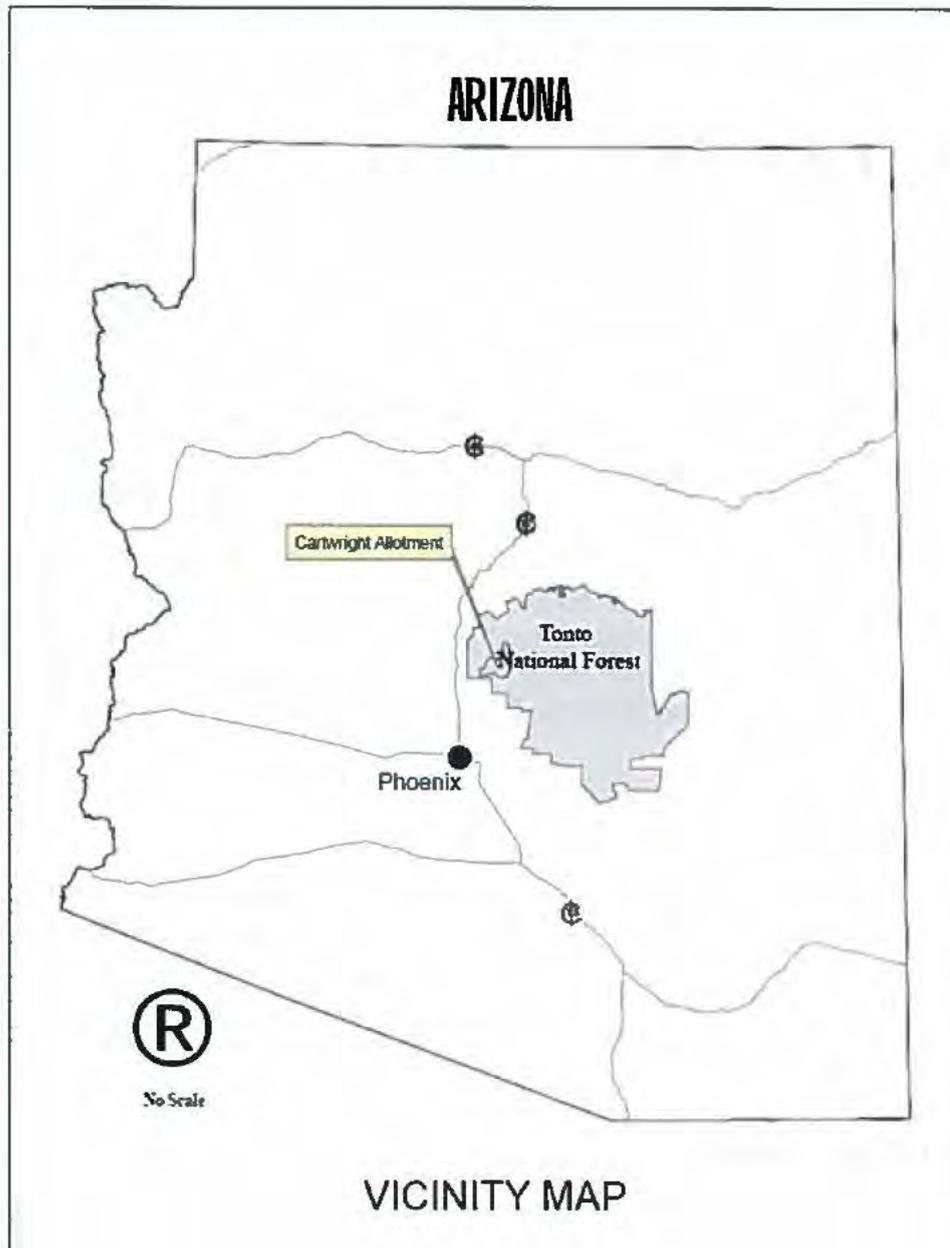


# CARTWRIGHT ALLOTMENT MANAGEMENT PLAN



The content of this Allotment Management Plan (AMP) is based on the selected alternative of the Cartwright Allotment Environmental Assessment (EA). The EA was developed following the procedures established under the National Environmental Policy Act (NEPA) as implemented through Forest Service policy contained within FSH 2209.13, Chapter 90, *Rangeland Management Decision making*. The Decision Notice and Finding of No Significant Impact which documents this decision were signed on August 4, 2008. A Biological Assessment outlining the effects of management on threatened, endangered, and sensitive species was signed on October 12, 2007, and informal concurrence was received from U.S. Fish and Wildlife Service on November 2, 2007.

### **ALLOTMENT DESCRIPTION**

The Cartwright Allotment is located seven air miles NNE of Carefree Arizona and approximately 30 miles north of Phoenix. It is located in Maricopa and Yavapai Counties on the Tonto National Forest. The allotment is bordered to the north by Blackjack and Red Creek Allotments, Sears Club-Chalk Mountain and St. Clair Allotments to the east, Bronco Allotment to the south, and New River Allotment to the west. The Seven Springs Recreation Site is located in the middle of the allotment. Cartwright Allotment has a history of grazing by domestic livestock dating back to the late 1800s. The allotment encompasses approximately 56,000 acres within three sub drainages (fifth code watersheds) of the Salt and Verde rivers and occurs in Management Area 1F of the Tonto National Forest Plan (USDA 1985, as amended). The vegetation on the allotment is extremely variable and consists of Sonoran Desert scrub, semi-arid grassland, chaparral, and juniper savannas. Small areas of riparian vegetation occur in drainages. Topographical features range from nearly level valley and elevated plains to very steep mountains and escarpments (2,220 feet near Lime Creek to 5,200 feet on the summit of Humboldt Peak.)

### **TYPE OF OPERATION**

The Cartwright Allotment supports a yearlong cow-calf operation with calves being sold in the fall or retained as yearlings and sold in the spring. Yearlings can be authorized in place of adult cattle using Animal Unit Month (AUM) equivalence on a case-by-case basis. The livestock grazing action will be a five-pasture deferred rotation. 6L Pasture will be designated as a grassbank pasture, to be used as needed by the Cartwright Allotment permittee.

### **PERMITTED NUMBERS**

The Term Grazing Permit for the Cartwright Allotment authorizes up to 350 adult cattle year-long. The Cartwright Decision Notice dated August 2008 and the EA (Mitigation Measures, p.23) authorizes an initial herd of less than 175 head of livestock and is based on resource conditions. Adaptive management practices will be implemented to determine annual carrying capacity based on climatic and resource conditions, status of range improvements, and permittee management practices. Stocking rates and pasture

rotations will be provided through Annual Operating Instructions (AOIs) drafted cooperatively with the permittee prior to the start of each grazing year.

### **ALLOWABLE USE**

Forage utilization on uplands will be managed at a level corresponding with light to moderate grazing intensity in order to provide for grazed plant recovery, increases in herbage production and retention of herbaceous litter to protect soils. Conservative use equates to 30-40% use on herbaceous species and <50% use on browse (current year's leaders). This means that about ½ of the good and fair forage value plants show signs of use by livestock, that there is little evidence of livestock trailing, and that most of the accessible range in relationship to water sources shows some use. Consistent patterns of utilization in excess of 40% of key species in key areas will be used as a basis to modify management practices or take administrative actions necessary to reduce utilization in subsequent grazing seasons.

Riparian use guidelines are as follows: *obligate riparian tree species* – limit use to <50% of terminal leaders (top 1/3 of plant) on palatable riparian tree species accessible to livestock (usually ≤ 6 feet tall); *deergrass* – limit use to <40% of plant species biomass; *emergent species* (rushes, sedges, cat-tails, horse-tails) – maintain an average of six to eight inches of stubble height during the grazing period. Riparian utilization will be measured seasonally when livestock are in the pasture. Livestock will be moved from the critical area or pasture when recommended guidelines are met.

### **PASTURE MANAGEMENT**

Professor, Lime Creek and Long Canyon Pastures have been removed from grazing. 6L Pasture will be set aside as a grassbank pasture to be used if resource concerns or livestock requirements result in the necessity for an extra pasture in any given year.

The remaining five pastures will be used in a deferred rotation, understanding that herd size and observed resource conditions will ultimately dictate the number of pastures, which pastures are used, and during which months. Grazing management will ensure that pastures receive periodic growing season rest or deferment in order to provide for grazed plant recovery. The sequence and timing of pasture rotations will be set annually based on monitoring of ecological conditions, utilization, and past management concerns or opportunities.

### **ADAPTIVE MANAGEMENT**

Grazing management is designed to provide sufficient flexibility to allow for adaptation when resource conditions change. Changes in management may include administrative decisions such as the specific number of livestock authorized annually, specific dates for grazing, class of animal or modifications in pasture rotations. However, such changes will not exceed the limits for timing, intensity, duration and frequency defined in the term grazing permit. Adaptive management will be implemented through AOIs, which will

adjust livestock numbers and the timing of grazing so that use is consistent with current productivity and is meeting management objectives.

Effectiveness monitoring (long-term) will show if trends in vegetation or soil condition are moving towards or away from stated desired conditions. Implementation monitoring will occur yearly. Downward trends in vegetation and soil/watershed condition that are observed in any given year will result in management actions being taken. Positive trends would be manifested as the absence or opposite of these occurrences.

Indicators of downward trend for vegetation include:

- Desirable and intermediate species decreasing in vigor.
- Lack of young plants from desirable and intermediate species.
- Invasion by undesirable species.
- Hedged and highlined shrubs. Dead branches generally indicate that shrubs are dying back.

Indicators of downward trend in soil stability include:

- Rill marks, which are small but conspicuous water channels around vegetation
- Active gullies are raw, actively downcutting, and may have headcuts. This type of gully may vary from a few inches to several feet in depth.
- Alluvial deposits; soil material transported and laid down as small fans in headwater drainages.
- Soil remnants; original topsoil held in place by vegetation or roots.
- Active terraces; usually caused by hooves of animals; stairstep in appearance on side-slopes.
- Exposed plant crown or roots (pedestalled plants).
- Wind-scoured depressions between plants.
- Wind deposits.
- Soil buildup behind plants, logs, and trees on the upslope side.

**Management actions** that may occur in response to monitoring results include:

- Improve livestock distribution using salting, herding, fences, or increased water availability.
- Adjust pasture season of use.
- Adjust livestock numbers up or down in response to forage production and distribution.
- Shorten/lengthen use period of pasture.
- Provide rest and recovery for pasture.
- Defer use until forage plants are dormant or seed is set.

## **MONITORING**

The objective of monitoring is to determine whether management is being properly implemented and whether the actions are effective at achieving or moving toward desired conditions. The permittee will be encouraged to participate in monitoring activities.

Records of livestock numbers, movement dates and shipping records will be kept by the permittee and will be provided to the District Range Staff annually at the winter meeting.

### **Uplands**

Utilization will be monitored on key forage species, which are native perennial grasses that are palatable to livestock. At a minimum, monitoring will include use in key areas in each pasture, but may include monitoring outside of key areas. A key area is a relatively small portion of a range selected because of its location, use or grazing value as a monitoring point for grazing use. It is assumed that key areas, if properly selected, will reflect the overall acceptability of current grazing management over the range.

A Forest Officer will be responsible for monitoring livestock grazing utilization with cooperation from the permittee. Changes in resource conditions, management, rangeland improvement conditions, or available water may result in changes in livestock use patterns. Available water or lack thereof has proven to change livestock use patterns as often as yearly. As livestock use patterns change, new key areas may be established and existing key areas may be modified or abandoned in cooperation with the permittee. Key areas will normally be ¼ mile from water, located on productive soils with level to intermediate slopes, and be readily accessible for grazing.

**Effectiveness monitoring** includes measurements to track condition and trend of upland and riparian vegetation, soil and watersheds. Monitoring will occur at least once over the ten-year term of the grazing authorization, or more frequently if deemed necessary.

**Implementation monitoring** will occur yearly and will include such things as inspection reports, forage utilization measurements in key areas, livestock counts and facilities inspections.

### **Riparian**

Implementation and effectiveness monitoring to evaluate achievement of desired conditions for riparian areas and stream channels will occur primarily at the critical stream reaches listed in Table 1.

**Table 1. List of critical stream reaches by pasture.**

<b>Stream Name</b>	<b>Pasture</b>
Cave Creek	6L
Cave Creek above group site, below Ashdale	Grays Gulch
Cave Creek	Humboldt
Walnut Spring	Humboldt
Walnut Spring Canyon	Seven Springs Holding
Walnut Spring Canyon	Mule Holding

**Implementation monitoring** - Utilization measurements are made following the Interagency Technical Reference (1996), McBride and Grove (2002), and Cowley and Burton (2005) or the most current acceptable method.

Effectiveness monitoring - Changes in riparian vegetation and stream channel geomorphology condition and trend will be measured at five to 10 year intervals. Protocols are described in the Interagency Technical Reference (1996), Cowley and Burton (2005), and Harrelson et al (1994), or the most current acceptable method.

**RANGE DEVELOPMENTS**

A comprehensive list of existing improvements assigned as maintenance responsibility is found in Part 3 of the term grazing permit. Existing range improvements will be maintained to Forest Service standards. Maintenance to keep improvements such as fences, troughs, stock tanks, etc. in good working order will be conducted in all pastures, grazed or ungrazed, and are the responsibility of the permittee.

- New or reconstructed fences will be built according to standards that provide for wildlife passage/crossing.
- A development that is listed as a spring or stock tank in the permit requires maintenance of all improvements connected with that improvement such as spring exclosure fences, pipelines, troughs, etc.
- Routine maintenance of existing range improvements is authorized without further clearance.
- If heavy equipment will be taken onto Forest Service lands for routine maintenance duties, the District Ranger must be notified in advance and will provide written authorization to the permittee.

The permittee has also identified a number of miles of boundary and pasture fence that was burned in the CCC Fire and needs to be rebuilt. The permittee is responsible for supplying materials and labor for these projects unless Range Betterment Funds or Fire Rehabilitation Funds are available from the Forest Service. Cost-share from other partnering agencies (NRCS, state grants) may also be available. All projects must be constructed to Forest Service standards.

Several improvements are proposed to promote achievement of desired conditions. The fence proposals below were analyzed for compliance with NEPA regulations. The one mile of Cave Creek will be fenced before the livestock graze Quien Sabe Pasture. The schedule for completion of all projects is 2009 and 2010.

**Table 2. Description and objective for proposed improvements**

Pasture Name	Proposed Improvement	Objective
Maverick	Rebuild the burned Camp Creek Exclosure and extend Camp Creek Exclosure northward to include spring area, approximately ½ mile total length	Continue exclosure area for studies; improve riparian condition, terrestrial/aquatic habitat and livestock distribution by reducing use in riparian area and moving cattle into the uplands; provide double fence separating livestock from Camp Creek residences

Bronco	Construct exclosure around ½ mile of 7 Springs riparian area	Improve livestock distribution and improve riparian condition, terrestrial and aquatic habitats, by reducing use in riparian area by moving cattle into the uplands.
Quien Sabe	Fence approximately one mile on south side of Cave Creek and tie into existing fence on north side of creek	Improve livestock distribution and improve riparian condition, terrestrial and aquatic habitats, by reducing use in riparian area by moving cattle into the uplands.

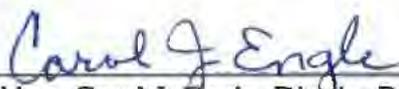
Additional new rangeland improvements will be assessed for need on a case by case basis. Any range improvement which will disturb the soil will require an archaeological clearance by the Forest Archeologist or a certified para-archeologist and a biological clearance by the District Wildlife Biologist. New improvements not anticipated by this Decision will also require a separate analysis to comply with NEPA regulation.

**BEST MANAGEMENT PRACTICES**

Management practices include measures to reduce or avoid resource impacts that are incorporated into the project design. These measures have been used on previous projects and are demonstrated to be effective at reducing environmental impacts. They are consistent with applicable Forest Plan standards and guidelines.

- Herding, salting and controlling access to waters will be used to achieve proper distribution or lessen the impact on sensitive areas. Salt will be placed by good feed, one quarter to one half mile from waters, and salting locations will be moved annually. Placement of liquid or bulk supplements will require prior approval by the District Ranger.
- All water developments will include appropriate wildlife access and escape ramps.
- All new fencing, reconstruction and maintenance of fences will be to Forest Plan standards to provide for wildlife passage through the fence. At a minimum, this will be a 4-strand fence with smooth bottom wire 16 inches off the ground and a total height of 42 inches or less. All existing fences will be maintained to Forest Standards and provide passage for wildlife through the fences.
- Mechanized equipment will not be used within riparian areas.
- Reduce livestock use in riparian and spring areas during the growing season to minimize impacts to woody and herbaceous plants and alterable banks.
- Make appropriate adjustments to the Annual Operating Instructions when necessary to accelerate resource recovery from drought, fire or disease.
- Manage for sufficient litter cover to minimize exposed soil, thus improving soil conditions over time.

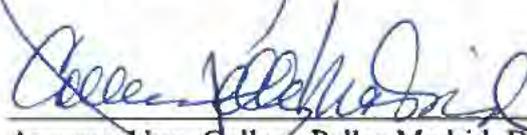
- Coordinate with range to achieve at least 80% of the potential riparian overstory crown coverage (USFS, 1985).
- Rehabilitate at least 80% of the potential shrub cover in riparian areas through the use of appropriate grazing systems and methods (USDA, 1985). Provide a minimum of four waters per section in small game, and one water per section in big game key areas (USDA, 1985).
- All proposed range facilities will be surveyed by qualified personnel for heritage resource prior to any ground-disturbing activities. Facilities will be built or modified to avoid impacts to sites. If unrecorded sites are discovered during the course of project implementation, activities will cease and the Forest Archeologist will be notified.
- Range facilities, if needed, will be located so as to avoid concentrations of livestock on identified heritage resource sites.
- No salting will occur within or adjacent to identified heritage sites. Salting, watering, or supplemental feeding will not be permitted where cultural sites or resources exist. (I stole this from earlier in the document) Don't repeat yourself.
- If impacts from grazing (e.g. excessive trampling, cattle rubbing against and knocking down standing features) are occurring to heritage sites, measures will be taken (e.g. fencing) to protect them.

  
 Prepared by: Carol J. Engle, District Range Staff

10/22/2009  
 Date

  
 Agreed to by: Schmidt Ranch LLC, Permittee

10/22/09  
 Date

  
 Approved by: Colleen Pelles Madrid, District Ranger

10/22/09  
 Date