

**Coordinated Resource Management Plan
for the
Copper Creek Allotment - Cave Creek Ranger District, Tonto National Forest
and
Horseshoe Allotment - Phoenix Field Office, Bureau of Land Management**

Prepared by:

Patti Fenner
Patti Fenner, Cave Creek District Range Staff
Tonto National Forest

23 Feb 1998

Date

Lee Higgins
Lee Higgins, Phoenix Field Office Range Conservationist
Bureau of Land Management

3-11-98

Date

Tim Hughes
Tim Hughes, Phoenix Field Office Wildlife Biologist
Bureau of Land Management

3/16/98

Date

D.S. Wilcox
Dick Wilcox, CTW Cattle Co.

2-24-98

Date

Approved by:

Delvin R. Lopez
Delvin R. Lopez, Cave Creek District Ranger

2/23/98

Date

Mike Taylor
Mike Taylor, Phoenix Field Office Manager

3/17/98

Date

MAR 24 1998

I. MANAGEMENT GOALS AND OBJECTIVES

The goal of this management plan is to achieve Desired Condition for this portion of the Agua Fria Grassland, as defined by the various resource components below.

A. Air Quality

Air quality in Class I Airsheds is maintained or improved. Prescribed burning activities are controlled to minimize visibility reduction and adverse smoke effects on not only Class I Airsheds, but public facilities and private lands in communities to the north, west and east of the project area.

B. Water Quality

Continue to meet state water quality standards as set by the Arizona Department of Environmental Quality. Meet ADEQ standards for Indian Creek and Lousy Canyon by reducing fecal coliform to acceptable levels. The transportation system is designed and maintained to prevent excessive sedimentation of streams.

C. Riparian Area and Stream Channel Condition

Overall goals are to attain proper functioning condition. There are four components of the riparian and stream channel system to address for desired condition: tree and shrub vegetation, herbaceous vegetation, streambanks and channels.

Tree and shrub vegetation. Maintain the current age class distribution with ample component of seedling and saplings.

Herbaceous vegetation. Increase the native species diversity, cover and vigor in areas where it has been reduced.

Streambanks. Decrease the erodability of the streambanks by increasing vegetative cover and decreasing hoof impacts.

Stream channels. Increase channel stability by decreasing width, increasing depth and building floodplains.

D. Vegetation/Watershed Condition

- * Improve the density and composition of grasses especially cool season grasses.
- * Increase vegetative groundcover (plant basal area plus litter) with a goal of approaching natural groundcover conditions
- * Improve compacted and impaired soils

E. Wildlife Habitat and Species Diversity

Wildlife habitat on the Horseshoe and Copper Creek Allotments is diverse and capable of sustaining a wide variety of species at viable population levels.

A wildlife habitat inventory has been completed for the allotment, which identifies suitable and potential habitat for threatened, endangered, and sensitive species, and identifies management strategies for each habitat type present. Suitable habitat for threatened and endangered species, and species of special concern is improving and maintaining an upward trend.

Pronghorn antelope populations on the Agua Fria Grassland are reproducing and maintaining a viable herd. Prescribed and natural fires are maintaining a mosaic of vegetation and reduced brush densities in pronghorn fawning areas. Barriers to pronghorn movement have been removed. Water sources are provided at intervals of every one mile. Natural water sources are maintained in Proper Functioning Condition to prolong water availability in intermittent or seasonal reaches. Constructed or developed waters are available to pronghorn throughout the entire year. Vegetation cover is maintained at a height of 1 foot or less.

Habitat for riparian-obligate species has improved and provides a multi-storied canopy with well-developed herbaceous understory. Riparian tree snag densities are adequate to provide habitat for cavity-nesting birds, and roost and den sites for other species. Species diversity within riparian areas has increased as vegetative conditions have improved.

Native fish populations are thriving in areas where they are naturally secure from effects of non-native fish.

F. Livestock Grazing

A viable livestock operation combines both allotments for advantages of flexibility in grazing patterns and stocking levels. Flexibility in numbers of calves will provide rest needed in drought years or after prescribed burns, without disrupting continuity needed to develop a quality adult cow herd.

A fairly high intensity livestock operation is desired, and feasible, due to permittee's other business as a working guest ranch.

G. Recreation

Continue to provide a quality recreation experience for the public in the form of dispersed camping, hunting, and sightseeing. The Great Western Trail has provided the opportunity to provide the public with interpretation of unique cultural and natural resources. Some of the more heavily used camping sites are developed.

The permittee will be under permit to operate their commercial business on Federally managed lands.

H. Cultural Resources

Extensive cultural resources on both allotments are actively protected by both agencies and the public to preserve their scientific, educational, and heritage values. Some of the larger masonry ruins that are well known have been selected for stabilization, rehabilitation, and/or interpretation.

I. Wild and Scenic Rivers

Grazing, recreation, and other uses along the Agua Fria River are managed to protect its outstanding scenic, cultural resource, and wildlife habitat values. Measures such as native fish introductions are undertaken to enhance natural resource values. The Agua Fria River Canyon is maintained in wild status with no new roads allowed.

J. ACEC'S

The Perry Mesa ACEC, Perry Mesa National Register District and the Larry Canyon ACEC are managed to protect significant cultural, historic and natural resources.

K. Mineral Extraction

All operations will continue to be carried out under approved Plans of Operation that emphasize minimum damage to surface resources and quality reclamation in a timely manner. Old abandoned mines will be reclaimed as funding and opportunity allow.

II. GRAZING STRATEGY

Beginning in 1997, the Copper Creek and Horseshoe Allotments will begin to be used in a coordinated livestock operation. The Forest Service, BLM, and permittee are full partners in implementation of this new grazing plan. The grazing strategy was evaluated under NEPA ("Environmental Assessment #AZ-024-95-60 Horseshoe/Copper Creek Allotments Coordinated Resource Management Plan"). A Decision Notice approving this plan was signed by both agencies in August 1997.

A cow/calf herd will utilize BLM lands and some pastures on the National Forest. Weaned calves from this herd will be placed on rougher pastures on the National Forest for the months October through April. The cow/calf herd will provide stability to the operation, with numbers to be sustained at approximately 500 head yearlong. Numbers in the calf herd will be very flexible, to allow for reductions during drought or when rest is needed for pastures that have been treated with prescribed fire. This herd will fluctuate from 375 to 950.

Pastures with important riparian areas are Boone, North and South River, Bobcat, Granite and Mesa Butte. Livestock use in these pastures will be limited to winter, from November 1 through March 1. The intermittent stretch of Copper Creek in the Cornstalk Pasture will be grazed from 1 1/2 to 2 months four years in five, between February and May.

Allowable use is set at 40% of current year's growth of key species in key areas on uplands, and 50% of herbaceous plants' growth in riparian areas.

The schedules in Part III will be followed. Normally, decisions to make minor shifts of 2 weeks or less to allow for varying moisture or forage conditions may be made by the permittee. Since this grazing plan is very intensive, with some pastures being grazed for only 2 week periods, it is vital the permittee maintain close communication with the land management agencies when he finds it necessary to deviate from the plan. Major changes in livestock movements between units must be jointly agreed upon by the permittee and land management agencies.

III. GRAZING SYSTEM AND SCHEDULE

See tables that follow

GRAZING SCHEDULE FOR COPPER CREEK/HORSESHOE ALLOTMENTS
YEAR 1

PASTURE	JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
COW HERD - 386 HEAD												
BOONE	XXXX	XX										
DOUBLE TANK		XX	XXXX	XX								
CORNSTALK												
PERRY MESA				XX	XXXX	XXXX	XXXX					
LOUSY								XXXX				
JOE'S HILL												
NEW MILL									XXXX	XXXX	XX	
COPPER 1 & 2												
SOUTH RIVER											XX	XX
NORTH RIVER												XX
YEARLING HERD - 950 HEAD												
BOBCAT											XX	
GRANITE												XXXX
MESA BUTTE	XXXX	XXXX	X									
BROOKLYN			XXX	XXXX	XX							

GRAZING SCHEDULE FOR COPPER CREEK/HORSESHOE ALLOTMENTS
YEAR 2

PASTURE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
COW HERD - 450 HEAD												
BOONE	XXXX	X										
DOUBLE TANK		XXX	XX									
CORNSTALK			XX	XXXX								
PERRY MESA					XXX	XXX	XX					
LOUSY												
JOE'S HILL							XX	XXXX	XX			
NEW MILL									XX	XXXX	XX	
COPPER 1 & 2											XX	
SOUTH RIVER												XX
NORTH RIVER												XX
YEARLING HERD - 950 HEAD JANUARY 1 - MAY 15						860 HEAD NOVEMBER 15 - DECEMBER 31						
BOBCAT												
GRANITE											XX	XX
MESA BUTTE	XXX	XXXX	X									XX
BROOKLYN			XXX	XXXX	XX							

GRAZING SCHEDULE FOR COPPER CREEK/HORSESHOE ALLOTMENTS
YEAR 3

PASTURE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
COW HERD - 500 HEAD												
BOONE	XXXX											
BOBCAT		XXX										
DOUBLE TANK												
CORNSTALK		X	XXXX	X								
NEW MILL				XXX	XXXX							
JOE'S HILL						XXXX	XXXX					
LOUSY								XXX				
PERRY MESA								X	XXXX	XXXX		
COPPER 1 & 2											XX	
SOUTH RIVER											XX	XX
NORTH RIVER												XX
YEARLING HERD - 860 HEAD JANUARY 1 - MAY 15 623 HEAD NOVEMBER 15 - DECEMBER 31												
GRANITE												
MESA BUTTE	XXXX	XXXX									XX	XXXX
BROOKLYN			XXXX	XXXX	XX							

GRAZING SCHEDULE FOR COPPER CREEK/HORSESHOE ALLOTMENTS
YEAR 4

PASTURE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
COW HERD - 500 HEAD												
BOONE												
BOBCAT/GRANITE	XXXX	XXXX										
DOUBLE TANK			XXXX	X								
CORNSTALK				XXX	XX							
PERRY MESA												
LOUSY					XX	X						
JOE'S HILL						XXX	XXXX	X				
NEW MILL								XXX	XXXX			
COPPER 1 & 2 / BULL - 250 HD.										XXXX		
BROOKLYN - 250 HD.										XXXX		
SOUTH RIVER											XXXX	
NORTH RIVER												XXXX
YEARLING HERD - 623 HEAD JANUARY 1 - MAY 15												
375 HEAD NOVEMBER 15 - DECEMBER 31												
BOBCAT											XX	
GRANITE												XXXX
MESA BUTTE	XXXX	XXXX										
BROOKLYN			XXXX	XXXX	XX							

GRAZING SCHEDULE FOR COPPER CREEK/HORSESHOE ALLOTMENTS
YEAR 5

PASTURE	JAN.	FEB.	MAR.	APRIL	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
COW HERD - 500 HEAD												
BOONE	XXXX											
DOUBLE TANK		XXXX	X									
CORNSTALK			XXX	XXX								
PERRY MESA				X	XXXX	XXXX						
LOUSY							XXXX					
JOE'S HILL								XXXX	XXXX			
NEW MILL										XXXX	XXX	
COPPER 1 & 2											X	
SOUTH RIVER												XX
NORTH RIVER												XX
YEARLING HERD - 950 HEAD												
BOBCAT											XX	
GRANITE												XXXX
MESA BUTTE	XXXX	XXXX	X									
BROOKLYN			XXX	XXXX	XX							

IV. RANGE DEVELOPMENT AND IMPROVEMENTS

1998 -- Construct 2 miles of fence south of Bishop Creek on the Copper Creek Allotment to create an enclosure. The cattleguard on Forest Road 677 has already been installed.

Estimated materials cost: \$3400.00

Estimated labor cost: 6000 00

1998 -- Install a pump, water storage and drinker at a well drilled in T10N R4E Sec. 31, in the vicinity of Hackberry Wash. A Big Game Tag Grant was obtained from Arizona Game and Fish to cost share this project with the permittee and Forest Service.

Estimated cost for contract to install pump system: \$9000.00

1998 -- Construct a wildlife water catchment in T9 ½ N R3E Sec. 34 (on the Horseshoe Allotment). This project is a BLM/Arizona Game & Fish Department Challenge Cost-Share project.

Estimated materials cost: \$17,500

Estimated labor cost: \$17,500

1998 - life of the plan -- Conduct prescribed burns in burn blocks in the area of these allotments as burning prescriptions allow. All costs for these burns are borne by the land management agencies.

1998 - 2000 -- Replace 7 gates with cattleguards and install a swinging gate, subject to available funding. The cattleguards will replace the gates at the Copper Creek corrals tank both existing gates into Lousy Pasture on Forest Road (FR)14, on FR677 at the fence between Cornstalk and Bobcat Pastures (this will be a new fence), on the road to Perry Mesa Tank (FR611) between North Brooklyn and Perry Mesa Pastures, at the Forest boundary on FR481, and on FR610 1/2 mile south of the junction with FR14.

Estimated cost of materials: \$16,800.00

Estimated installation cost: 20,300.00

1998 - 2001 -- Improve pronghorn access to New Windmill, Perry Windmill, and Perry Mesa, Silver Creek, Cornstalk and Copper Tanks by modifying existing fence configurations.

1998 - 2006 -- Modify all boundary and interior pasture fences to pronghorn specifications.

By 2006 -- Chemical renovation of Perry Mesa Tank and Perry Tank Canyon. This will be an Arizona Game & Fish Department/BLM cooperative effort to eradicate mosquitofish. It will be conducted when funding becomes available.

By 2006 -- In cooperation with Arizona Game & Fish Department and U.S. Fish and Wildlife Service, introduce Gila topminnow and desert pupfish into Silver Creek and the tributary to Larry Creek. Both BLM and FS will be involved. Stocking with these federally listed fish will not preclude ongoing management activities.

By 2006 -- Partially fence Perry, South Campbell and Copper Tanks to provide emergent vegetative cover for waterfowl using these areas during migration. Funding source BLM, FS, possibly Arizona Game & Fish Department.
Estimated cost: \$2,000 per tank labor + materials.

1999- 2006 -- Maintain a barrier to control vehicle access downstream of the Bloody Basin Road in the Agua Fria River. BLM/Horseshoe Allotment permittee cooperative effort, with BLM funding.

V. GENERAL MANAGEMENT CONSIDERATIONS

A. Actual Use Records

The permittee will keep accurate accounting of cattle numbers entering each unit and the length of time the unit was grazed. These records will be presented to the Forest Service or the BLM at the end of each grazing season.

B. Annual Operating Plan

The Annual Operating Plan will be the action plan that implements management decisions for the current year. These instructions will serve as a working understanding with the permittee for carrying out actions described in this Coordinated Resource Management Plan. The annual plan will outline items of permittee responsibility such as salting, range improvement construction and maintenance, and livestock movement between units.

C. Followup Action and Monitoring

Implementation Monitoring:

Riparian Area and Stream Channel Condition:

Implementation monitoring will occur annually in late spring/early summer after cattle come off the Mesa Butte, Bobcat, Cornstalk and Granite Pastures. Key reaches will be walked to estimate use on woody and herbaceous species and assure that cattle have been removed from the pastures.

Key reaches include:

Bobcat Pasture

1) Silver Creek below FR677 to FS/BLM boundary

2) Silver Creek above FR677 to FR577 crossing

3) Bishop Creek above FR677 to Pasture boundary

Cornstalk Pasture

4) Copper Creek ½ mile both above and below FR390 crossing

Mesa Butte Pasture

5) Copper Creek ½ mile reach above Piedmont Well.

6) Bishop Creek above FR1981 crossing upstream ½ mile

Another key reach may be established along upper Silver Creek in the Granite Pasture

Livestock Grazing:

Use levels of key species in key areas will be monitored during and/or after the grazing season so that levels of 40% are not exceeded.

Effectiveness Monitoring:**Riparian Area and Stream Channel Condition:**

Use Riparian Functional Condition checklist to evaluate functioning condition of Silver Creek, Bishop Creek, Indian Creek and the Agua Fria River in 1998, 2001, and 2004.

Stream Channels:

A permanent stream cross section was established in Copper Creek to monitor changes in stream channel morphology. Another cross section will be established in lower Silver Creek in the perennial reach. Stream cross sections will be remeasured every 5 years.

Stream stability (Pfankuch) (USDA 1973) and riparian condition ratings (USDI 1991) will be used to quantify and record change at five year intervals.

Riparian Vegetation:

A permanent vegetation transect was established in the vicinity of the Copper Creek stream cross section to monitor: 1) recruitment and use of woody species; and 2) cover and use of deergrass. An additional survey will be established in lower Silver Creek. Transects will be remeasured annually.

The two riparian surveys in upper Bishop Creek and in the Copper Creek administrative pasture should be repeated after one complete grazing rotation.

Five photopoints have been established on the Copper Creek Allotment. They are rephotographed annually.

Watershed Condition:

The BLM currently has two monitoring plots on the ranch that are both within the same range site. Two new transects have been established on the Horseshoe Ranch, one on the Loam Hills and one in the Rock Outcrop range site types. Three grazing exclosures have been built adjacent to the range trend transects. Transects will be read utilizing the dry weight rank pace frequency method with 40 cm² quadrats (Smith and Despain 1990).

The Forest Service currently has 9 Parker Three Step clusters on the allotment that are in three range site types. These transects are in key areas and will be used for monitoring using Parker 3-Step and/or Frequency Plot methods.

Read all key area monitoring sites once to establish baseline data, then read the transects after a grazing cycle and as necessary after burns through the year 2006.

Wildlife:

Sample fish every 2 years in Silver Creek, Larry Creek tributary and the Agua Fria River using electrofishing and seines to determine native and exotic species presence and relative abundance. Expand this effort to include any introduction sites for native fish.

Utilize Arizona Game & Fish Department pronghorn and deer survey results to assess distribution, recruitment, and relative abundance response to management actions related to movement and water availability.

Document waterfowl using partially fenced and unfenced water tanks 2 times during the winter and once during the summer. Compare waterfowl use on treated and untreated tanks to determine effectiveness of partial exclosures.

Validation Monitoring:**Watershed Monitoring:**

In five years, after baseline monitoring information has been established, evaluate whether objectives were valid and if the resource is moving positively toward them. Redefine objectives if necessary.