



U.S. Department of the Interior
Bureau of Land Management
Arizona State Office

Phoenix Resource Area

July 1996



Hassayampa River Canyon Wilderness Management Plan, Environmental Assessment, and Decision Record



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BLM/AZ/PL-96/010

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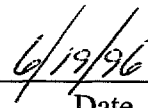
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Arizona

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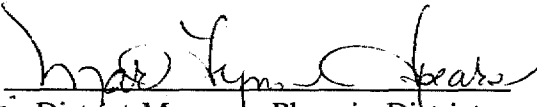
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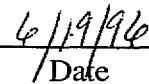

Area Manager, Phoenix Resource Area



Date


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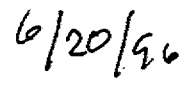

District Manager, Phoenix District



Date

Approved by:


State Director, Arizona



Date

Table of Contents

Plan Summary	1
Background	1
Main Features of the Proposed Plan	1
Part I -- Introduction	3
Purpose and Background	3
Wilderness Overview	3
Location and Access	3
Wilderness Values and Unique Attributes	3
General Management Situation	5
Wildlife	5
Livestock Grazing	5
Vegetation	5
Riparian Habitat	5
Soils	5
Minerals	8
Water	8
Air Quality	8
Cultural Resources	8
Recreation	8
Law Enforcement/Search and Rescue	9
Fire	9
Existing Developments	9
Inholdings	9
Overflights	9
Motorized/Mechanized Use	9
Part II -- National Wilderness Management Goals	11
Part III -- Issues	13
Management Plan Issues	13
Naturalness	13
Recreation	13
Issues Solved Through Policy or Administration Actions	13
Miscellaneous Administration	13
Boundary Identification	14
Motorized/Mechanized Prohibitions	14
Wildlife	14
Law Enforcement/Search and Rescue	14
Cultural Resources	15
Minerals	15
Part IV -- Management Strategy	17
Part V -- Wilderness Management	19
Introduction	19
Management Objective 1 -- Naturalness	19
Management Actions	19
Monitoring	21

Additional Actions, if Required	21
Management Objective 2 -- Recreation Opportunities	25
Management Actions	25
Monitoring	26
Additional Actions, if Required	26
Part VI -- Plan Evaluation	29
Part VII -- Implementation Schedule and Cost Estimate	31
Part VIII -- Public Involvement	33
Comments	33
Part IX -- List of Preparers	35
Glossary	37
Bibliography	39
Appendix	
Fire Suppression Procedures for the Hassayampa River Canyon Wilderness	41
Introduction	41
Operating Procedures	41
Detection	41
Initial Attack	41
Escaped Fire Situation Analysis	42
Motorized and Mechanized Equipment	42
Approval	42
Exceptions	42
Tactical Considerations	43
Planning	43
Line Construction and Holding	43
Logistics	43
Documentation	44
Rehabilitation	44
Environmental Assessment	45
Introduction	45
Purpose and Need	45
Conformance to Land Use Plans	45
Relationships to Statutes, Regulations and Other Plans	45
Description of the Proposed Action and Alternatives	45
Alternative A -- Proposed Action	45
Alternative B -- No Action (Current Management)	45
Affected Environment	45
Environmental Impacts	47
Alternative A -- Proposed Action	47
Impacts to Wildlife	47
Impacts to Riparian Habitat	47
Impacts to Soil and Water	47
Impacts to Vegetation	47
Impacts to Range Management	47
Impacts to Mining	48

Impacts to Recreation	48
Impacts to Wilderness Values	48
Cumulative Impacts	48
Mitigation Measures	48
Residual Impacts	49
Alternative B -- No Action (Current Management)	49
Impacts to Wildlife	49
Impacts to Riparian Habitat	49
Impacts to Soil and Water	49
Impacts to Vegetation	49
Impacts to Range Management	49
Impacts to Mining	49
Impacts to Recreation	49
Impacts to Wilderness Values	49
Cumulative Impacts	49
Mitigation Measures	50
Residual Impacts	50
Consultation and Coordination	50

Finding of No Significant Impact	51
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Tables

1. Special Status Species Known to Occur or Potentially Occur in the Hassayampa River Canyon Wilderness	6
2. Grazing Allotments in the Hassayampa River Canyon Wilderness	6
3. Hassayampa River Canyon Wilderness Fire History	10
4. Proposed Range Developments	21
5. Range Development Maintenance Schedule	23
6. Maintenance Schedule of Proposed Range Developments	24
7. Wildlife Inventory	24
8. Naturalness Monitoring Standards	24
9. Recreation Monitoring Standards	26
10. Plan Implementation Schedule for Ongoing Projects	31
11. Plan Implementation Schedule for Special Activities	32
12. Approval Level Needed for Use of Fire Equipment	42
13. Comparison of Alternatives	46

Maps

1. Hassayampa River Canyon Wilderness	4
2. Grazing Allotments and Range Developments	7
3. Trails and Access Points	22

Plan Summary

Background

- The Arizona Desert Wilderness Act of 1990 designated the 11,583-acre Hassayampa River Canyon Wilderness.
- Bureau of Land Management (BLM) policy requires the development of a management plan that will:
 - protect wilderness values,
 - allow for visitor use and enjoyment,
 - allow for the minimum tool to be used to accomplish resource objectives inside the wilderness and
 - allow legislatively accepted uses (see Glossary), such as livestock grazing and mining.
- Priorities are protecting current wilderness conditions and restoring riparian areas.
- Public meetings and mailings assisted the BLM in developing the Hassayampa River Canyon's wilderness issues.
- The Public Work Group assisted in plan development.

Main Features of the Proposed Plan

- The BLM will reevaluate management objectives and actions periodically and update them as needed.
- Two objectives are established: preserve naturalness and provide for primitive recreation opportunities. Seventeen specific actions stem from the objectives.
- Vegetation conditions will be monitored to ensure that naturalness values are maintained or improved.

- The riparian zone will be monitored and adjustments to livestock management practices made to improve habitat quality.
- Existing livestock operations will continue.
- Range developments may be maintained according to schedule.
- Wildfire will be suppressed using aircraft and fugitive fire retardant whenever possible. The BLM authorized officer may approve the use of motorized and mechanized equipment under special conditions.
- No vegetation gathering permits, i.e., firewood, jojoba, will be issued.
- Four new range developments, one within the wilderness, are proposed to protect riparian vegetation.
- Visitor use will be monitored to determine if trail use and camping activities are at a level to maintain opportunities for solitude and primitive recreation.
- Approximately 21 miles of trails will be inventoried for type and condition; there are no plans for improving or signing these trails and no new trails are planned.
- Civilian overflights are restricted to 2,000 feet above ground level, except under certain emergency circumstances.
- A total of 440 acres of state lands (surface) is identified for acquisition.
- Motorized use within the wilderness is limited to:
 - periodic maintenance of range developments,
 - response to life- and property-threatening emergencies,
 - pursuit of felons, suspected felons or game law violators and
 - aerial wildlife inventories.

Part I -- Introduction

Purpose and Background

The purpose of this plan is to guide management of the Hassayampa River Canyon Wilderness. The Wilderness Act of 1964 (Public Law 88-577) and the Arizona Desert Wilderness Act of 1990 (Public Law 101-628) enacted November 28, 1990 are the authorities for establishment of the wilderness.

This plan is tiered to the *Phoenix Resource Management Plan/Environmental Impact Statement* (1988b) (known as the Phoenix RMP). The Phoenix RMP established general management guidelines for the Lake Pleasant Resource Conservation Area, which contains part of the wilderness (see especially pages 13 through 75). The remainder of the wilderness was planned for in the *Lower Gila North Management Framework Plan* (1983), but was not analyzed under the National Environmental Policy Act of 1969. This interdisciplinary implementation plan supersedes the *Range Development Maintenance Plan* (BLM, 1995) and incorporates the *Black Canyon Habitat Management Plan* (BLM, 1993a) regarding the wilderness.

The wilderness characteristics that motivated Congress to designate the Hassayampa River Canyon Wilderness will be preserved by implementing the Hassayampa River Canyon Wilderness Management Plan. The BLM will manage the Hassayampa River Canyon Wilderness for its scenic, resource and recreational values and opportunities for solitude. Naturalness and recreation objectives have been established for the wilderness. The management actions for achieving each objective are detailed in this plan.

Wilderness Overview

Location and Access

The Hassayampa River Canyon Wilderness is 60 miles northwest of downtown Phoenix and 16 road miles northeast of Wickenburg in Yavapai County on the southern flank of the Weaver Mountains (see Map 1). The 11,583-acre wilderness does not include 440 acres of state land inholdings.

Access to the area from the south is provided by Constellation Road leading north from Wickenburg. The road, maintained by the county and a private

party, is suitable for use by two-wheel-drive vehicles. Where the road crosses private land, permission from the landowner is required for its use. Access to the area from the west is via the road to Fool's Canyon. This road is maintained by private parties and crosses BLM land. It is suitable for four-wheel-drive vehicles and is open to the public. However, access to Fool's Canyon crosses private land. There is no continuous legal access on any road to the wilderness.

The Hassayampa River Canyon Wilderness is in all or portions of secs. 12 through 14, 23 through 27 and 34 through 36, T. 9 N., R. 4 W., and secs. 1, 2, 10, 11, 14 through 22 and 28 through 31, T. 9 N., R. 3 W., Gila and Salt River Base and Meridian.

Wilderness Values and Unique Attributes

Fourteen miles of the Hassayampa River and its spectacular canyon form the centerpiece of this wilderness. The canyon is abundant with sheer walls and seasonal waterfalls. It and its rugged tributary canyons offer the visitor splendid opportunities for solitude. Most of the trails in the isolated backcountry are infrequently used.

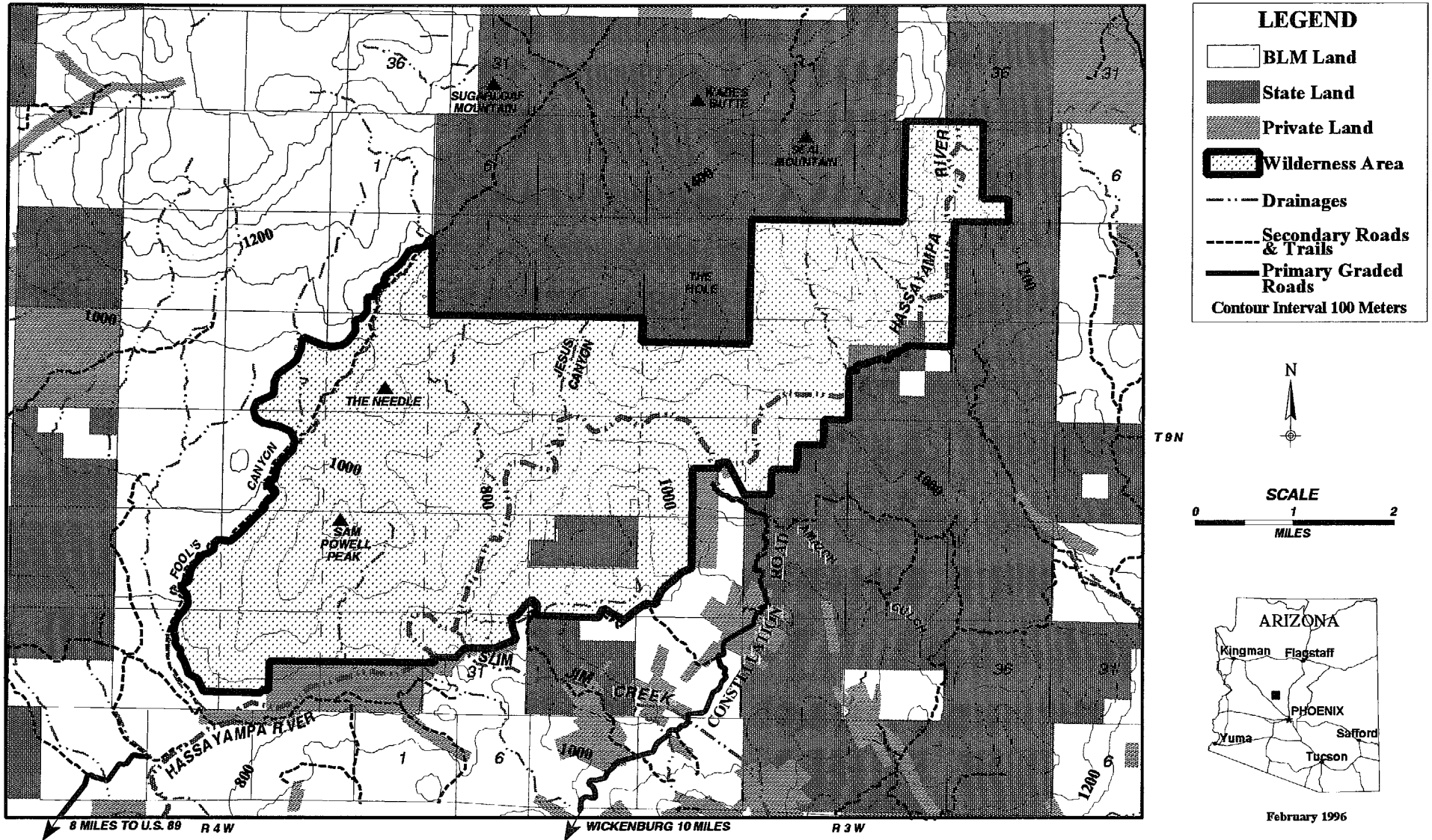
Riparian vegetation grows in the canyon bottom. A transition zone of chaparral from the north and desert vegetation from the south occurs in the major side canyons.

The wilderness is in the Central Mountain Region, a transition zone between the Colorado Plateau and the Basin and Range physiographic provinces. Geologically, it consists of older rock types such as granite, gneiss and schist. Locally, the older rock is commonly overlain by more recent volcanic rocks such as basalt and tuffs, forming steep cliffs and narrow gorges along the river.

Topographically, the wilderness offers tremendous variety. There is a 2,000-foot change in elevation within the area. Elevation rises from the canyon floor at 2,500 feet to Sam Powell Peak at 4,015 feet and on to the extreme northern portion of the wilderness at nearly 4,500 feet. Terrain and ecological diversity are exceptional for a relatively small area.

The Hassayampa River in this region has been recommended as nonsuitable for national wild and scenic river status. The segment which flows through

Map 1. Hassayampa River Canyon Wilderness



the wilderness is adequately protected and there are no threats of development or other actions which could be prevented through wild and scenic river designation (BLM, 1994).

General Management Situation

Wildlife

Mule deer, javelina, mountain lion and black bear are the big game animals in the area. Small game animals include desert cottontail rabbit, mourning dove, white-winged dove and Gambel's quail. In the area, four special status wildlife species are known to occur and two additional species may occur (see Table 1).

The Hassayampa River through the wilderness was surveyed for southwestern willow flycatchers in June and July 1995. No willow flycatchers were recorded. The Hassayampa River in this area, evaluated to determine if it constitutes potential habitat for this species, was not considered potential habitat.

The *Black Canyon Habitat Management Plan* (BLM, 1993a) outlines the wildlife management strategy for the region. However, no wildlife projects are proposed within the wilderness.

Arizona Game and Fish Department hunt management Unit 20B (Region VI) is south of the Hassayampa River and Unit 20C (Region IV) is north of the river.

Livestock Grazing

Section 4 of the Wilderness Act of 1964 provides for livestock grazing to continue in areas where it is already established. The wilderness incorporates portions of six grazing allotments (see Table 2). Map 2 shows these allotments and range developments. All are perennial/ephemeral and support yearlong cow/calf operations. A two-pasture deferred rotation system is in place on the Moralez Allotment, the only operation with an allotment management plan.

Vegetation

Three biological zones -- interior chaparral, the Arizona upland subdivision of the Sonoran desertscrub and Sonoran riparian deciduous woodland -- are the biotic communities represented in the wilderness. Interior chaparral contains a mixture of shrubs that includes scrub live oak (*Quercus turbinella*), mountain mahogany (*Cercocarpus montanus*), desert buckbrush

(*Ceanothus greggii*), sugarbush (*Rhus ovata*), hollyleaf buckthorn (*Rhamnus crocea*), beargrass (*Nolina microcarpa*), wait-a-minute bush (*Mimosa biuncifera*), manzanita (*Arctostaphylos pungens*) and yellow bush penstemon (*Keckiella antirrhinodes* var. *microphylla*). The Arizona upland subdivision of the Sonoran desertscrub is characterized by foothill palo verde (*Cercidium microphyllum*), saguaro (*Cereus giganteus*), triangleleaf bursage (*Ambrosia deltoidea*) and creosotebush (*Larrea tridentata*). Sonoran riparian deciduous forest tree species are Fremont cottonwood (*Populus fremontii*), Gooding willow (*Salix goodingii*) and velvet mesquite (*Prosopis velutina*).

No federally listed threatened or endangered plants have been identified in the Hassayampa River Canyon Wilderness.

Ecological condition is the vegetative state of an ecological site in relation to the natural potential plant community. Ninety percent of the wilderness is currently considered to be in fair to good ecological condition while the remaining 10 percent is considered poor. At present, the trend overall is static in the upland areas (BLM, 1985). Ecological changes occur very slowly and very little change is expected. In the riparian zone, the changes are more dynamic.

Riparian Habitat

The 14 linear miles of riparian habitat along the Hassayampa River in the wilderness were inventoried in 1990, 1991 and 1995. Studies of this zone (on file at the Phoenix District Office, BLM) reveal that approximately the upper four miles are in proper functioning condition. The remainder is functioning at risk (see Glossary) due to upstream problems beyond the wilderness, lack of species diversity and lack of woody species regeneration. Bank erosion in certain locations poses a threat to stability.

Soils

The majority of the soils of the mountains and hills are characterized as very shallow to shallow, well-drained and gravelly, cobbly and stony clay loams and loams derived from weathered basalt or andesite. The majority of the soils on valley fans, valley sides, terraces and plains are characterized as shallow to deep, well-drained and gravelly, cobbly or stony sandy loams derived from weathered granites (Soil Conservation Service, 1976).

**Table 1. Special Status Species Known to Occur or Potentially Occur
in the Hassayampa River Canyon Wilderness**

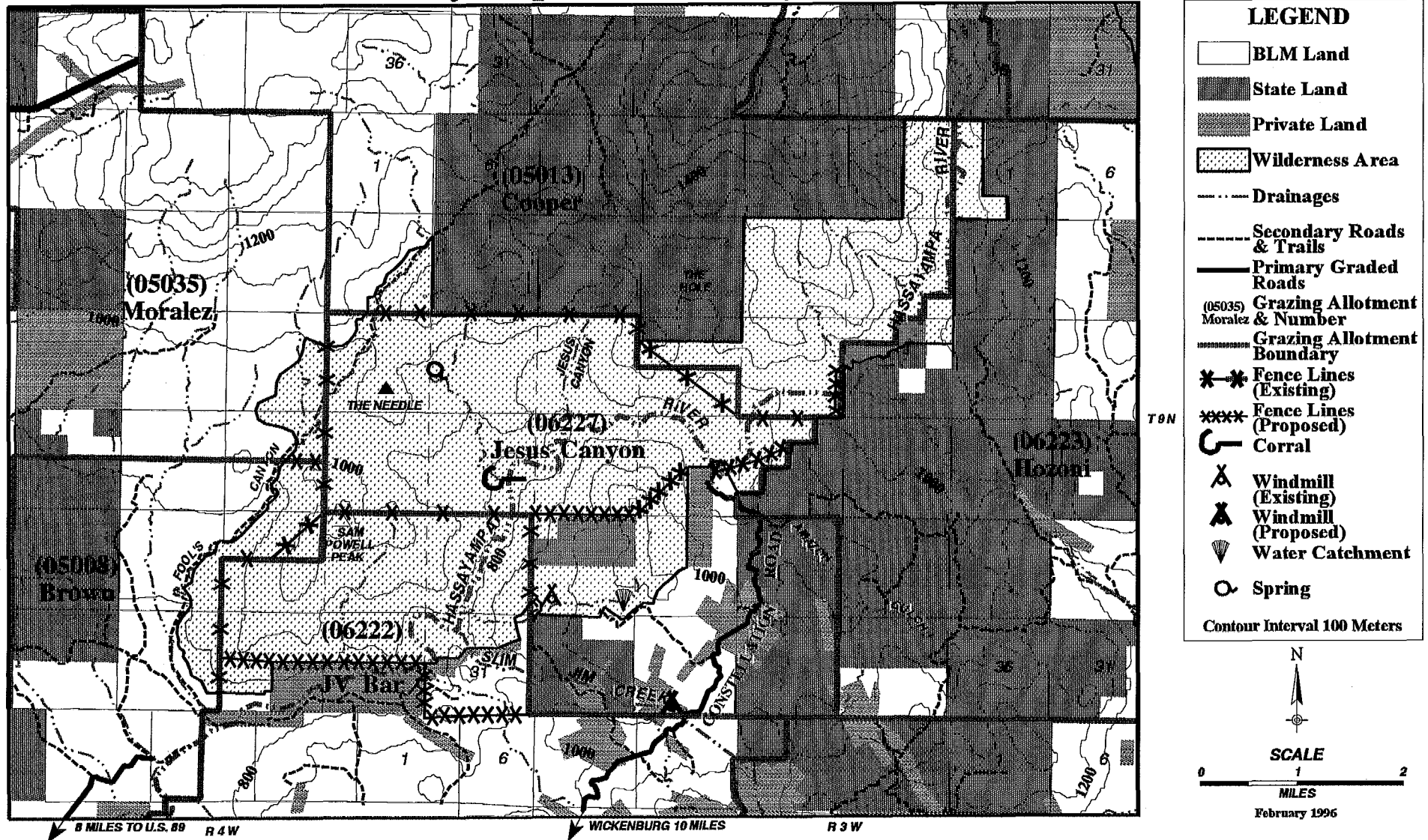
Common name	Scientific name	Status	Occurrence
Lowland leopard frog	<i>Rana yavapaiensis</i>	C2, C	X
Arizona toad	<i>Bufo microscaphus</i>	C2, C	P
Mexican garter snake	<i>Thamnophis eques</i>	C2, C	P
Desert tortoise	<i>Gopherus agassizii</i>	C2, C	X
Desert sucker	<i>Catostomus clarki</i>	C2	X
Longfin dace	<i>Agosia chrysogaster</i>	C2	X

C2 = Federal candidate Category 2
 C = Arizona threatened native wildlife candidate
 X = Known to occur
 P = Undocumented but potentially occurs

Table 2. Grazing Allotments in the Hassayampa River Canyon Wilderness

Allotment name/number	Total animal unit months (AUMs)	Percentage of wilderness acres in allotment	Percentage of allotment acres in wilderness
Jesus Canyon (06227)	1,068	43	80
Cooper (05013)	2,220	23	20
JV Bar (06222)	1,781	22	18
Brown (05008)	732	7	19
Moralez (05053)	826	3	5
Hozoni (06223)	1,704	2	3

Map 2. Grazing Allotments and Range Developments Hassayampa River Canyon Wilderness



Minerals

The mineral estate of the entire wilderness is federally administered. There are currently six mining claims in the wilderness. Occasional rockhounding, gold panning and casual use mining occur along the river. Metals economically produced in the general area, outside of wilderness, have included gold, silver, iron, lead, nickel and zinc.

Water

The wilderness is in the Hassayampa River watershed of the Lower Gila River sub-basin of the ongoing Gila River System and Source General Water Rights Stream Adjudication. The primary water source in this wilderness is the Hassayampa River, although it is estimated that there are an additional 15 to 20 springs and three wells in the area. There is one earthen reservoir.

Congress reserved a quantity of water for each wilderness sufficient to fulfill the purposes of the Arizona Desert Wilderness Act. The priority date of this reservation is November 28, 1990, the actual date of the Act. The BLM must inventory and quantify these rights and submit notification to the Arizona Department of Water Resources. All existing senior rights prior to the establishment of wilderness are protected. Existing state rights are held by the BLM for livestock, wildlife and recreation purposes and by private individuals (i.e., grazing permittees and mining claimants) for livestock, domestic, irrigation and mining purposes.

The Hassayampa River is one of many flash flood streams in the southwestern U.S. Most of the time, the flow of the Hassayampa River is very small; much of the river goes dry in the summer and fall. A sudden, intense rainfall turns the river into a dangerous, raging torrent. The river may erode many feet downward or an entirely new stream channel may be formed and the old one abandoned. Streamside vegetation may be swept away. Within a few days, the river may return to its normal quiet state.

The Hassayampa River has formed a narrow gorge through the wilderness. Although this stretch of the river is not perennial, surface flow exists most of the year. Flows on the perennial stretch at the Box Canyon Gauge downstream of the wilderness seldom fall below .50 cubic foot per second. A peak flow of 58,000 cubic feet per second was recorded at this site.

Water quality problems on the upper reaches of the Hassayampa River have included low pH, low dissolved oxygen and high concentrations of

numerous metals. In some cases, the source of the pollutants has been traced to mines above the wilderness. As a result, the 1994 assessment by the Arizona Department of Environmental Quality shows most of the Hassayampa River upstream of Wickenburg as being in "nonsupport" of state surface water quality standards. Water in the wilderness cannot be guaranteed safe for human consumption without treatment.

The BLM has conducted limited bacterial monitoring of the Hassayampa River below the wilderness. No samples have exceeded the standard for fecal coliform.

Air Quality

The wilderness is designated as a Class II air quality zone unless it is reclassified by the state of Arizona (BLM Manual 8560.36) as a result of the procedures prescribed in the Clean Air Act (42 U.S. Code 7401, as amended, 1977).

Cultural Resources

Two prehistoric artifact scatters are known to exist in the wilderness; however, there is little cultural resource inventory of the wilderness. Prehistorically, the area was occupied by the Hohokam. From the late prehistoric until contact with Europeans, the area was utilized by the Western and Northeastern Yavapai -- Yuman-speaking groups. No traditional cultural properties have been identified.

Three historical sites are known to occur in the wilderness. These are small wood or stone structures built in the first half of the 20th century and related to ranching and mining. These operations have been economic mainstays of the area since the 1860s and more remains may be found in the future.

Recreation

Recreational opportunities in the Hassayampa River Canyon Wilderness include backpacking, hiking and sightseeing. Visitors can experience riparian habitats along the river canyon while hiking along a free-flowing desert stream. Pristine side canyons and washes are numerous and offer the visitor many opportunities for solitude. Approximately 21 miles of trails traverse the wilderness.

A major annual trail ride, sponsored by the Desert Caballeros, originates in nearby Wickenburg and passes through the wilderness. This event, held every spring since 1947, attracts 200 to 400 riders. The Wickenburg area dude ranches also conduct

occasional rides through the wilderness. To date, no commercial permits have been issued; however, several outfitters have expressed interest in pursuing commercial trail rides within the Hassayampa River Canyon Wilderness.

At present, recreation use data for the Hassayampa River Canyon come from casual observation and information gathered at the visitor register box at Amazon Gulch. Preliminary wilderness inventory of existing trails and visitor use shows little evidence of regular use. The main season of visitor use is September through April. No permit system exists for individual activities in the wilderness.

Law Enforcement/Search and Rescue

Law enforcement activities are carried out by BLM Rangers and Yavapai County Sheriff's Deputies. BLM officers are responsible for investigating resource protection violations and the Yavapai County Sheriff's officers have jurisdiction regarding crimes against persons and property. Due to the remoteness of some areas, response time to an incident is approximately two to three hours. The Yavapai County Sheriff's Office is the lead agency for any search and rescue incident in the wilderness.

Unauthorized motorized vehicle use has been a minor problem in the wilderness. Most of the known unauthorized use has been in the Amazon Gulch area.

Fire

The six recorded fires in the wilderness since 1980 burned more than 4,000 acres (see Table 3). The Hassayampa River Canyon consists primarily of desertscrub, oak chaparral and riparian fuels. Annual fuel accumulation in the desertscrub is generated by winter season precipitation. During years of high precipitation, the annual fuels can be abundant and significantly increase the fuel loading and fire potential. Fires are best characterized as fast-moving fires of medium intensity.

Arizona chaparral either burns fiercely or does not burn at all; there seems to be no gradation in between. Conditions must be suitable for generating rapid spread before fire will propagate. Resistance to control is moderate to very high.

Riparian fuels consist of cottonwood, sycamore, willow, salt cedar and mesquite. Mature cottonwoods, sycamores and willows occur in areas with few ground fuels and fire does not spread rapidly unless promoted by wind conditions. Fires in salt cedar and mesquite burn hot and spread rapidly.

Existing Developments

Evidence of modern development includes 21 miles of trails (excluding the Hassayampa River) and two miles of former vehicle routes. Range developments include 12.5 miles of fence, a corral, a windmill, a reservoir and a developed spring (see Map 2).

Currently, there are no portals (i.e., parking areas or information kiosks, etc.) on the wilderness boundaries. There is a register box at the Williams Ranch on Amazon Gulch.

The trails and range developments are relatively unnoticeable and only slightly impair the area's natural character.

Inholdings

The wilderness, entirely BLM-administered, surrounds or bounds approximately 440 surface acres of state of Arizona lands, for which the subsurface mineral rights are federally held. The two state parcels have wilderness values equal to the surrounding wilderness.

Overflights

Threatening the wilderness solitude values are military aircraft conducting occasional high-speed, low-level training flights, flying as low as 100 feet. The Arizona Desert Wilderness Act of 1990 provides for continuing military overflights, specifically exempted from the provisions of wilderness management.

Motorized/Mechanized Use

Motorized/mechanized uses are allowed with prior approval of the Phoenix Resource Area Manager under certain circumstances. These include low-level aerial flights for wildlife inventory, livestock development maintenance, fire suppression, search and rescue and law enforcement.

Table 3. Hassayampa River Canyon Wilderness Fire History			
<i>Date</i>	<i>Fire number</i>	<i>Acres</i>	<i>Cause</i>
06/23/1980	0076	960	Human
07/17/1980	0863	300	Lightning
06/09/1981	1061	1,225	Human
06/24/1981	1062	625	Human
07/12/1987	7425	130	Human
07/14/1987	7429	847	Lightning

Part II -- National Wilderness Management Goals

The National Wilderness Management Goals, Wilderness Act of 1964 (Public Law 88-577) provide the basic guidance upon which all wilderness actions are based (BLM Manual 8561 -- Appendix 1). The BLM's goals in the Hassayampa River Canyon Wilderness are as follows.

1. To provide for the long-term protection and preservation of the area's wilderness character under a principle of nondegradation. The area's natural condition, opportunities for solitude, opportunities for primitive and unconfined types of recreation and any ecological, geological or other types of scientific, educational, scenic or historical value present will be managed so that they will remain unimpaired.
2. To manage the wilderness for the use and enjoyment of visitors in a manner that will leave the area unimpaired for future use and enjoyment as wilderness. The wilderness resource will be dominant in all management decisions where a choice must be made between preservation of wilderness character and visitor use.
3. To manage the area using the minimum tool, equipment or structure necessary to successfully, safely and economically accomplish the objective. The chosen tool, equipment or structure should be the one that least degrades wilderness values temporarily or permanently. Management will seek to preserve spontaneity of use and as much freedom from regulation as possible.
4. To manage accepted but nonconforming uses permitted by the Wilderness Act and subsequent laws in a manner that will prevent unnecessary or undue degradation of the area's wilderness character. Accepted uses are the exception rather than the rule; therefore, emphasis is placed on maintaining wilderness character.

Part III -- Issues

Planning issues were identified in a series of internal and public meetings. BLM resource specialists met on August 6, 1992 to discuss potential management issues for this plan. The BLM met with interested members of the public on August 27 and September 9, 1992 and received comments and issues. As the plan was being developed in January and February 1993, additional concerns were received and considered.

Wilderness issues are divided into two categories: issues addressed in this management plan and issues solved through policy or administrative actions.

The National Wilderness Goals stated in Part II provide a foundation for the BLM's management in the Hassayampa River Canyon Wilderness. The BLM determined that selected issues needed to be addressed by establishing certain resource objectives. Specific management actions, to be implemented for achieving the objectives, are discussed in Part V.

Most issues will be addressed by administrative actions that constitute the normal course of BLM business. Actions will be guided by law, regulation and national and Phoenix District policy. Wilderness management is generally guided by BLM Manual 8560 and H-8560-1. These are actions that would be implemented (some already have) whether or not the BLM develops a management plan for the Hassayampa River Canyon Wilderness. Therefore, no further mention of these issues will be made after this section of the wilderness management plan.

Management Plan Issues

Naturalness

BLM actions will be dedicated to preserving natural conditions in compliance with national goals 1, 3 and 4. Vegetative condition is a prime indicator of naturalness. Management Objective 1 (see Part V) will address:

- ecological condition of the plant community with livestock utilization,
- riparian management,
- wildfire,
- range development maintenance and
- state inholding acquisition/access.

Recreation

The majority of issues identified were concerned with recreational opportunities. The BLM must manage its recreation program in the Hassayampa River Canyon Wilderness to preserve natural features and characteristics as stated in National Wilderness Goal 2. Management Objective 2 (see Part V) will address:

- visitor use levels,
- visitor experience,
- level of development, i.e., trails and portals,
- visitor information/education and
- a permit system.

Issues Solved Through Policy or Administrative Actions

Authority for administrative actions, where applicable, is given in each response to the issue identified.

Miscellaneous Administration

- Water rights
- Water quality
- Scientific research projects
- Vegetation gathering activities
- Casual use (of mining claims)

The BLM will inventory all water sources and developments and submit notification of federal reserved rights for the wilderness to the Arizona Department of Water Resources (Arizona Desert Wilderness Act of 1990, Public Law 101-628; Water Quality Act of 1987, Public Law 100-4).

Water quality problems have largely been traced to mines upstream of the wilderness. The Arizona Department of Environmental Quality monitors these problems and, in conjunction with the Environmental Protection Agency, undertakes remedial efforts.

Scientific research proposals, including cultural, botanical, wildlife and geological resources, will be dealt with on a case-by-case basis. Any authorized

project will be conducted using the minimum tool so as to not degrade wilderness values.

Vegetation gathering activities, i.e., firewood, jojoba, will not be permitted so that vegetation communities will remain relatively unaltered.

Hobby collecting (rockhounding) of minerals is allowed in the wilderness. Collection is limited to hand methods.

Boundary Identification

- Wilderness signage
- Wilderness fencing

Approximately four miles of wilderness boundary have been signed. Boundary signing is an ongoing process, concentrating on vehicle access points and trail entrances. Informational signage, currently nonexistent, is discussed in Part V, Objective 2.

There is no need to fence the wilderness.

Motorized/Mechanized Prohibitions

The use of motorized and mechanized equipment including, but not limited to, vehicles, tools, aircraft under the 2,000-foot threshold, bicycles or gliders is prohibited. Exceptions under certain (mostly emergency) circumstances are specified under the headings Law Enforcement/Search and Rescue and Fire Suppression Procedures. The use of wheelchairs is allowed.

Wildlife

- Predator control and inventory
- Wildlife catchments
- Protection of desert tortoise and habitat
- Reintroduction of special status native fish
- Control of domesticated animals

Government-sponsored animal damage control activities using nonmotorized/nonmechanized methods will be considered on a case-by-case basis by the BLM Area Manager. The proposed control activity will be reviewed and may be approved if one of several conditions is met and if removal of the target animal/animals will not affect wilderness values. The conditions are: protecting federally listed threatened or endangered species, preventing the spread of disease affecting other wildlife and/or humans, preventing serious loss of domestic livestock or controlling non-indigenous species which are direct

conflict with indigenous species.

No wildlife developments exist in the wilderness and none are proposed in this plan. Any proposals will be considered on a case-by-case basis.

The BLM will manage desert tortoise habitat as Category II according to *Desert Tortoise Habitat Management on Public Lands: A Rangeland Plan* (BLM, 1988a) and *Strategy for Desert Tortoise Habitat Management on Public Lands in Arizona* (BLM, 1990). The habitat will be managed for no net loss in quantity or quality.

The BLM will determine, in cooperation with the Arizona Game and Fish Department, the potential of aquatic habitat to support special status native fish populations by the year 2000.

All dogs will be kept on leashes to prevent harassment of wildlife. Dogs used for livestock operations will be the exception.

Law Enforcement/Search and Rescue

- Search and rescue emergencies
- Enforcement of wilderness laws and other resource violations

Coordination of search and rescue efforts in the wilderness will be ensured by managers through regular meetings of the agencies involved. The Yavapai County Sheriff's Office is the lead agency on any search and rescue incidents in the wilderness.

The wilderness will be patrolled from vehicles on the boundaries and by aerial surveillance, as conditions demand. Foot patrols inside the wilderness will be conducted as warranted. Aerial patrols will be performed in fixed-wing aircraft, observing the 2,000-foot altitude threshold over wilderness.

Law enforcement and other BLM personnel will educate the public on wilderness regulations and behavior as a normal part of their encounters in and around the wilderness.

Law enforcement incidents in the wilderness including, but not limited to, the pursuit of felons and game law violators will be carried out using necessary equipment. The BLM will continue to work cooperatively with Yavapai County law enforcement agencies and the Arizona Game and Fish Department. Motorized equipment, including low-flying aircraft (under the 2,000-foot threshold) will be withdrawn when the emergency no longer exists. Justification of motorized equipment use will be submitted in writing

to the Area Manager within 48 hours of conclusion of the incident.

Cultural Resources

- Management of historical buildings and other cultural resources
- Native American groups' concerns for cultural resource sites

There are three known historical buildings in the Hassayampa River Canyon Wilderness.

Significant historic and prehistoric resources will be protected by appropriate means, including surveillance and stabilization. Stabilization plans will be dealt with on a case-by-case basis, ensuring protection of wilderness values, utilizing the minimum tool.

Cultural resources are managed as a scientific value. The resource is available to individuals and institutions with legitimate research interests. Research plans will specify utilization of the minimum tool to protect wilderness values. Research proposals will be considered on a case-by-case basis.

Cultural resources are valued by Native Americans whose ancestors may have occupied the area and by the general public (sociocultural value). Access to traditional cultural properties for groups with legitimate interests will be allowed in accordance with existing regulations for travel in wilderness.

Minerals

- Use of valid mining claims
- Use of mechanized equipment for conducting validity examinations

Mining claimants who qualify for a waiver of payment of the annual maintenance fee, and after issuance of a contest complaint, shall be allowed to collect mineral samples. This allows the claimants to confirm mineral exposures existing prior to the date of the withdrawal, and to conduct the minimum assessment work in a manner that will cause insignificant surface disturbance.

Pursuant to 43 Code of Federal Regulations 3809.1-4(b)(4), a plan of operations must be approved prior to conducting operations which exceed the level of casual use as defined at 43 Code of Federal Regulations 3809.0-5(b). Prior to approval of a plan of operations, the BLM shall initiate a validity examination to determine if the claim(s) supported a discovery as of the date of the withdrawal. If there is a finding of no discovery, the BLM shall promptly initiate contest proceedings. If the findings of an Administrative Law Judge and any subsequent appeals support a finding of no discovery, the claims shall be declared null and void. If the validity examination finds that the claim(s) support a discovery, the plan of operations shall be approved and operations shall be allowed to proceed in a manner which will not cause unnecessary or undue degradation.

The use of mechanized equipment for conducting validity examinations will be determined on a case-by-case basis.

Upon completion of operations, the area shall be reclaimed pursuant to the standards at 43 Code of Federal Regulations 3809.1-3(d) and, if practicable, in a manner which will prevent the degradation of wilderness values.

Part IV -- Management Strategy

This plan has been designed to serve as the management guidance for the Hassayampa River Canyon Wilderness. Implementation will commence following public review and final approval.

An interdisciplinary team developed two general management objectives for meeting the National Wilderness Management Goals (see Part II). The objectives and associated management actions were designed to help meet the goals of preserving the wilderness characteristics of the area while providing for primitive recreational opportunities, solitude and the continuation of nonconforming but accepted uses permitted by the Wilderness Act.

The two objectives address naturalness and

recreation opportunities. The planned actions and monitoring of their effectiveness are designed to ensure that the characteristics which define the wilderness remain stable or actually improve.

Future issues, actions or opportunities will be considered on a case-by-case basis. If, through evaluation, actions are determined to be consistent and compatible with the goals and objectives, they will be incorporated into the plan without amendment of the plan. Inconsistent or incompatible actions will be further evaluated and be subject to public review and comment.

Management objectives will be reevaluated periodically and updated as needed.

Part V -- Wilderness Management

Introduction

Planned management actions in the wilderness were designed to meet the objectives of preserving the naturalness of the area and providing opportunities for primitive recreation. This part of the plan presents the management objectives and planned actions with rationale statements. Monitoring tasks are outlined to evaluate the effectiveness of the management actions.

Management Objective 1 -- Naturalness

Maintain or improve naturalness in the Hassayampa River Canyon Wilderness by:

- maintaining the vegetation in its present fair to good ecological condition on 90 percent of the wilderness while improving the remaining 10 percent currently considered to be in poor condition,
- improving riparian habitat along the Hassayampa River in the wilderness to proper functioning condition by the year 2005,
- minimizing wildlife habitat loss due to wildfire,
- minimizing permanent human impacts to wilderness characteristics due to potential development of 440 acres of state lands within the wilderness boundary,
- minimizing recreational firewood collection impacts to trees surrounding camping areas,
- allowing natural revegetation of two miles (six acres) of former vehicle routes,
- minimizing the use of mechanical equipment for the maintenance of range developments and
- minimizing the effects of wildlife management operations.

Rationale: This objective addresses the first, third and fourth National Wilderness Management Goals.

The first goal, preservation of wilderness character, or naturalness, includes maintenance of vegetation condition and prevention of unnecessary damage to trees from recreational firewood gathering and livestock use. Riparian habitat (see Glossary) is essential for the survival of certain wildlife species.

Improved riparian habitat will increase biological diversity. It is a Bureauwide goal to attain 75 percent of all riparian habitats in proper functioning condition (see Glossary). The third goal, use of the minimum tool to reduce human imprints, includes minimizing mechanized equipment use for fire suppression and wildlife surveys. The fourth goal, management of accepted uses, includes maintenance of range developments.

Management Actions

1. Allow no more than 50 percent utilization of key upland forage species.

Rationale: Utilization of less than 50 percent forage (species to be determined) has been determined as adequate to ensure that plant communities are maintained in a healthy condition. Fifty percent forage utilization will maintain vegetation in its current fair to good condition while areas of poor forage condition will improve to fair over the long term.

2. Limit livestock grazing in the riparian area to October 1 to April 1, subject to weather conditions.

Rationale: Heavy spring/summer use of the riparian zone is avoided and the light fall/winter use occurs when vegetation is dormant. Livestock tend to remain in the uplands during the fall and winter, using the canyon bottom to obtain water. Bank stability is maintained, thereby reducing erosion potential.

Due to unforeseen variables, e.g., weather or wildfire, the operator may be allowed to change the grazing schedule to compensate for these situations. The move dates shown in the grazing schedule are approximate; actual movements may be within two weeks (before or after) the specified date. Any changes greater than two weeks will be coordinated and in consultation between the rancher and the BLM Area Manager.

3. Install a four-mile-long fence within the wilderness, a one-mile-long fence at the wilderness boundary and a two-mile-long fence and a well with windmill outside of the wilderness to control livestock access to the riparian area during the growing season.

Fences will not be constructed until viable upland water has been established (see Table 4 for proposed developments and Map 2 for their locations).

Rationale: Fences and waters can help to keep livestock away from riparian vegetation during the growing season.

4. Fully suppress all fires.

Rationale: Sonoran vegetation in the wilderness has evolved with infrequent wildfires. Many desirable plants, especially saguaro, are adversely affected by fire. In addition, native vegetation may be replaced by introduced annuals after a fire. Wildfire within the riparian community is likewise not an effective tool to achieve resource objectives. While the interior chaparral community is a fire-adaptive system, it exists as "islands" within and intermittently along the edges of the wilderness and cannot be effectively manipulated. Prevention of fire is important to meet the vegetation component of naturalness (see Appendix for suppression procedures).

5. Acquire the state lands in T. 9 N., R. 3 W., sec. 14, W $\frac{1}{2}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$ and sec. 29, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NW $\frac{1}{4}$ or permit adequate access, if requested.

Rationale: Acquisition of the 440 acres will prevent uses incompatible with wilderness management. Potential means of acquisition include exchange, purchase or third party donation. If the BLM is unsuccessful in acquiring the state lands, adequate access will be permitted upon request of the owner (Public Law 88-577, Section 5a). Any permit for access will be in such a manner as to cause the least lasting impact on wilderness while allowing reasonable use of the nonfederal inholding.

6. Restrict firewood use to dead-and-down wood for campfires only.

Rationale: Cutting live trees and gathering branches from standing trees for firewood can lead to serious degradation of the Sonoran, riparian and chaparral habitats, seriously affecting naturalness and vegetative health. Therefore, it is necessary to enforce this wood restriction.

7. Allow natural revegetation of former vehicle routes.

Rationale: As motorized vehicles are incompatible with the goals of wilderness management, former vehicle routes have been closed and allowed to revegetate naturally. The routes, used to access range developments, were infrequently used even before wilderness designation. Natural revegetation has begun to reclaim most of these routes, now identified as trails.

8. Make the maintenance procedures for one proposed and 10 existing range developments in wilderness conditions of the appropriate grazing leases (see tables 5 and 6). Any developments no longer needed will be removed from the schedule and rehabilitated as part of the reevaluation and update of the plan (see Map 2 for locations of allotments and existing and proposed developments).

Rationale: Use of the minimum tool allows for inspection and maintenance of range developments while protecting the wilderness characteristics (i.e., naturalness).

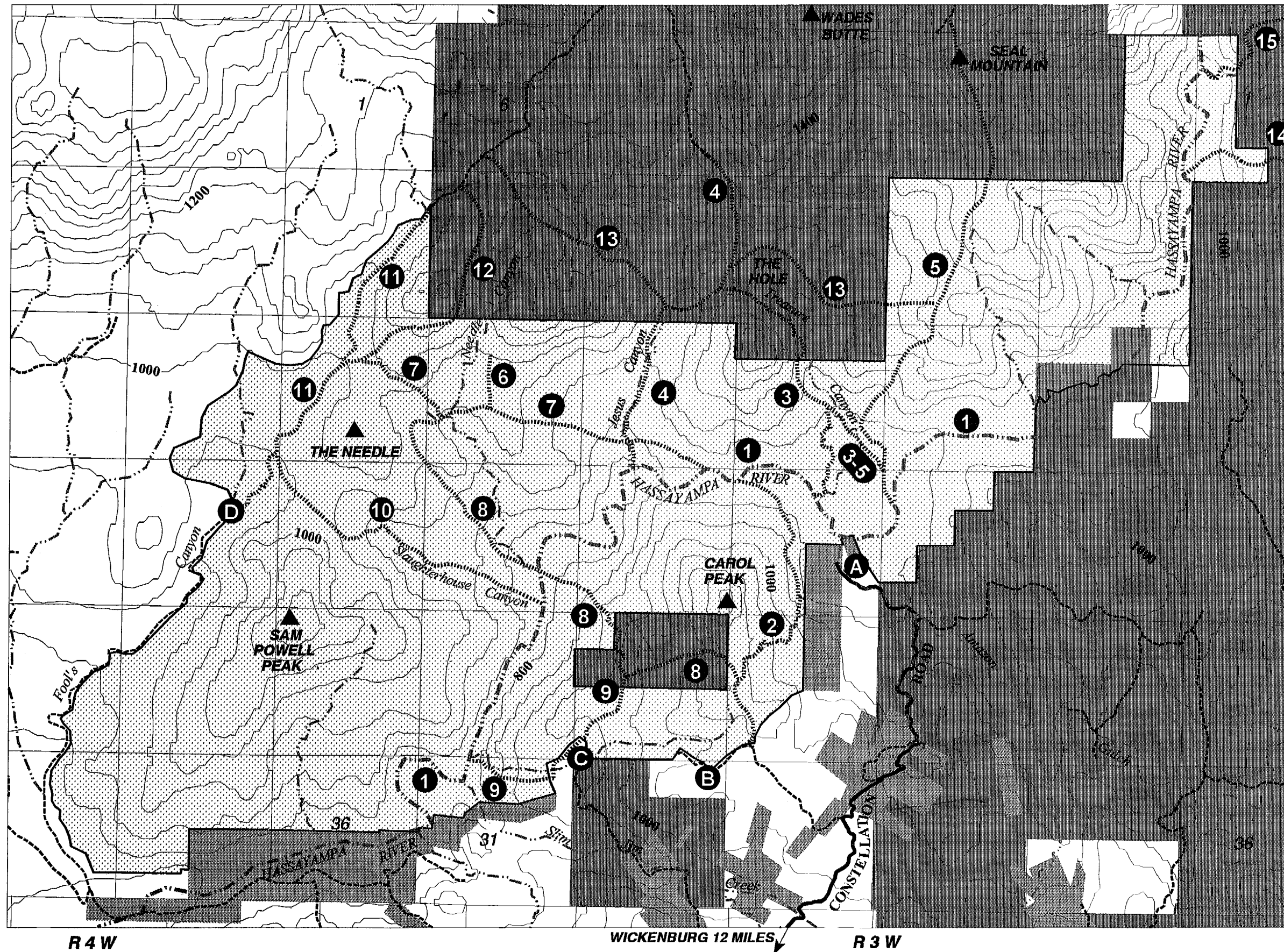
Periodically, major repairs to range developments will be necessary. A pickup truck may be required to carry materials and tools using existing trails. The permittee is required to notify the Area Manager at least two weeks in advance of initiating such repairs.

Emergency situations threatening human life, property (including livestock) or public land resources may also occur. The use of motor vehicles or other motorized equipment in emergency situations is permissible. The operator of the equipment is required to notify the BLM Area Manager when the emergency situation has been detected and before entering the wilderness with the equipment. If the Area Manager cannot be notified prior to entry, contact must be made within 48 hours following the emergency entry.

9. In accordance with the memorandum of understanding with the Arizona Game and Fish Department, the Department will conduct low-level survey flights on weekdays between December 15 and February 15. The Department will notify the BLM before each flight.

Rationale: The Arizona Game and Fish Department manages the wilderness wildlife populations and has been conducting annual aerial flights to determine populations of mule deer, javelina and mountain lion (see Table 7). The time period provides continuity with previous survey periods.

Map 3. Trails and Access Points Hassayampa River Canyon Wilderness



LEGEND

- BLM Land
- State Land
- Private Land
- Wilderness Area
- Drainages
- Trails
- Secondary Roads
- Primary Graded Roads

Contour Interval 50 Meters

- Potential Portals**
- A** Amazon Gulch
 - B** George Washington Mine
 - C** ATOS Mine
 - D** Fool's Canyon

- Trails**
- 1** Hassayampa (follows river)
 - 2** Black Rock Mine
 - 3** Treasure Canyon (Mystery)
 - 4** Jesus Canyon
 - 5** Cooper (Goodman)
 - 6** Dropoff
 - 7** Needle
 - 8** Williams
 - 9** Balanced Rock
 - 10** Slaughterhouse Canyon
 - 11** Fool's Canyon
 - 12** Roy Waits
 - 13** Hole
 - 14** Jacob's Ladder
 - 15** Oak Creek
 - 3-5** Cooper-Treasure Link

SCALE

0 1 2
MILES

February 1996

T 9 N

R 4 W

WICKENBURG 12 MILES

R 3 W

Table 4. Proposed Range Developments				
Proposed development	Location	Action	Access	Material and labor
Pasture fence (Jesus Canyon Allotment)	T. 9 N., R. 3 W., secs. 20-22	Construct pasture division fence	Pack animal or helicopter delivery if necessary	Four miles of fence material, contract labor
Cooper/Hozoni water gap fence	T. 9 N., R. 3 W., secs. 14 and 15	Build water gap across river	Across state land	One mile of fence material, contract labor
JV Bar pasture fence	T. 9 N., R. 4 W., secs. 35 and 36; T. 9 N., R. 3 W., sec. 31	Construct pasture division fence	Across public and wilderness boundary	Two miles of fence material
Slim Jim water development (Jesus Canyon Allotment)	T. 9 N., R. 3 W., sec. 33	Drill and equip well in Slim Jim Wash	Across public lands not in wilderness	Drill well and equip with windmill

Flights are restricted to weekdays when there are fewer visitors and fewer impacts to solitude.

10. Conduct monitoring of vegetative condition.

Rationale: Vegetation monitoring is the observation and systematic collection of resource data to determine the success of management actions toward achieving the Naturalness Objective. It provides quantifiable data needed to periodically review and evaluate vegetation condition and the impacts of livestock and people on vegetation.

Monitoring

1. One pace frequency transect will be established in each representative natural plant community and read once every three years. The Pace Frequency Method will be used to evaluate condition and trend. Two individual plots will be established and observed along four parallel straight line pace transects with 50 plots systematically placed at one or more pace intervals along each transect. The indicators of success will be an evaluation of no change in plant frequency by species, which would maintain the current 90 percent good and 10 percent fair condition. An evaluation of groundcover -- including live vegetation (basal), litter, rock and bare ground -- is recorded.

2. Trend photo plots and key forage utilization transects will be established in key vegetative communities and read annually.
3. Vegetation damaged by recreational use around camping areas will be documented annually.
4. Range developments will be field checked annually for compliance (see tables 5 and 6).
5. Establish and read utilization studies within the riparian area annually.
6. Photo points established during the riparian Proper Functioning Condition inventory will be repeated annually.
7. A riparian Proper Functioning Condition Assessment will be conducted every two years.

Vegetation monitoring standards have been established to measure the effectiveness of the management actions (see Table 8).

Additional Actions, if Required

1. Should damage from excessive livestock use occur, management practices will be adjusted. Corrective actions include, but are not limited to, reduction in allowed livestock numbers.
2. Should damage from recreational firewood collection exceed standards, campfires will be prohibited (see Objective 2 for additional recreation use monitoring).

Table 5. Range Development Maintenance Schedule

Development and number	Location	Action	Access	Frequency	Current condition
FENCES					
Jesus Canyon/Cooper boundary, includes Cooper fence gate (0893)	Fence: T. 9 N., R. 3 W., secs. 15,22, 16; T. 9 N., R. 4 W., secs. 12,13 Gate: T. 9 N., R. 3 W., secs. 15,22	Fence: Routine inspection and maintenance Gate: Repair after flooding	Fence: Horseback Gate: Tractor in riverbed	As needed	Fair
Jesus Canyon/JV Bar boundary (1021)	T. 9 N., R. 3 W., secs. 19,20,30; T. 9 N., R. 4 W., secs. 24,25	Routine inspection and maintenance	Horseback	As needed	Fair
Jesus Canyon/Brown boundary (1038)	T. 9 N., R. 4 W., secs. 23,24	Routine inspection and maintenance	Horseback and mules	As needed	Fair
Brown/JV Bar boundary (964)	T. 9 N., R. 4 W., secs. 26,27,34,35	Routine inspection and maintenance	Horseback and mules	As needed	Fair
Jesus Canyon/Moralez boundary (1105)	T. 9 N., R. 4 W., secs. 13,14,23,24	Routine inspection and maintenance	Horseback and mules	As needed	Fair
Brown/Moralez boundary (806)	T. 9 N., R. 4 W., sec. 23	Routine inspection and maintenance	Horseback and mules	As needed	Fair
OTHER DEVELOPMENTS					
ATOS windmill (well), includes two storage tanks (5125) (Jesus Canyon Allotment)	T. 9 N., R. 3 W., sec. 29, SW $\frac{1}{4}$ SW $\frac{1}{4}$	Routine inspection and maintenance	Inspection on horseback, vehicle to haul materials	Maintenance once a year	Fair
Washington Tank (5155) (Jesus Canyon Allotment)	T. 9 N., R. 3 W., sec. 29, SE $\frac{1}{4}$ SE $\frac{1}{4}$	Clean reservoir sediment; disturbance confined to previously disturbed area	Bulldozer walked in on existing trails	Maintenance every five years	Fair
Thumb Butte Spring (035961) (Jesus Canyon Allotment)	T. 9 N., R. 3 W., sec. 18, NW $\frac{1}{4}$ SW $\frac{1}{4}$	Routine inspection and maintenance	Horseback	As needed	Good
Corral (035962) (Jesus Canyon Allotment)	T. 9 N., R. 3 W., sec. 19, SW $\frac{1}{4}$ SE $\frac{1}{4}$	Routine inspection and maintenance	Horseback	As needed	Fair

**Table 6. Maintenance Schedule of Proposed Range Developments
(in wilderness and at boundary)**

<i>Proposed development</i>	<i>Location</i>	<i>Action</i>	<i>Access</i>	<i>Frequency</i>
FENCES				
Jesus pasture fence	T. 9 N., R. 3 W., secs. 20-22	Routine inspection and maintenance	Horseback	As needed
Cooper/Hozoni water gap fence	T. 9 N., R. 3 W., secs. 14,15	Routine inspection and maintenance; repair after flooding	Across state land	As needed
JV Bar pasture fence	T. 9 N., R. 4 W., secs. 35,36; T. 9 N., R. 3 W., sec. 31	Routine inspection and maintenance	Horseback	As needed

Table 7. Wildlife Inventory

<i>Method</i>	<i>Frequency</i>
For mule deer and javelina -- low-flying aircraft (helicopters or fixed-wing) overflights	Annually between December 15 and February 15; surveys not to exceed four hours per year; Area Manager will be notified in advance of all planned surveys; AGFD will request written permission from Area Manager for additional flights, if necessary
For mountain lion -- on foot or horseback	Infrequently and informally

Table 8. Naturalness Monitoring Standards

<i>Factor</i>	<i>Indicator</i>	<i>Standard</i>
Key forage species plant trend (based on Pace Frequency Method)	Species (to be determined)	No change in plant frequency with a 90 percent good condition by 2005
Key browse species utilization	Species (to be determined)	Less than 50 percent utilization through 2005
Riparian woody seedlings utilization	Cottonwood and willow	Less than 50 percent utilization; 70 percent of all age classes will be seedlings
Recreation use vegetative damage	Amount of tree limb damage	No observable tree damage within 100 feet of camping areas

Management Objective 2 -- Recreation Opportunities

Provide for primitive recreation opportunities while ensuring preservation of wilderness characteristics by:

- maintaining the existing trail system (see Map 3),
- preventing the establishment of new trails,
- preventing the establishment of new campsites and obliterating existing sites,
- minimizing encounters by wilderness users and
- establishing an education/visitor use program.

Rationale: This objective addresses the second National Wilderness Goal, visitor use that will leave the area unimpaired. This goal includes preventing the establishment of new trails and campsites and minimizing encounters by wilderness users through education and permit stipulations.

Management Actions

1. Complete trail inventory for type and condition. Previously unknown trails located during inventory will be added to the system or obliterated.
2. Maintain the existing trail system at its current level to protect wilderness character by preventing erosion and new trail routes through:
 - establishing periodic maintenance of the trail system,
 - utilizing native materials and hand tools for erosion control,
 - permitting minor trimming of vegetation for user safety,
 - permitting minor reroutes of existing trails if required to protect resource values and if the old segments are rehabilitated and
 - placing no markers or signs in the wilderness.
3. Complete a campsite inventory for location, level of use, impacts to resources, disturbed vegetation, human waste and trash.

Rationale: Maintaining the existing trail system at current levels and eliminating all new trails and any campsites will protect wilderness

values and naturalness characteristics while providing for primitive recreation opportunities.

4. Establish the following **commercial recreation** policy (including nonprofit groups that require a special recreation permit) with the following standard stipulations for permits. Schedule visiting parties to avoid encounters.

Overnight

- No base camps within the wilderness
- Spike camps limited to 10 people, one night, 10 packstock
- Feed (no hay) provided for animals
- Each permit holder limited to a maximum of two nights per 14-day period

Day use

- Limited to 20 people or 10 people with 10 stock
- Each permit holder limited to a maximum of four groups per 14-day period

Special events, e.g., the historic Desert Caballeros annual ride, will be handled on a case-by-case basis.

5. Establish a **noncommercial recreation** policy that states:

- no group size limits will be imposed unless under a special recreation permit, but group size will be monitored and
- large group sizes will be discouraged through education and a visitor information program.

Rationale: The policy for commercial and noncommercial recreation use is consistent with the national goals and the plan objective. Commercial and special recreation permit stipulations will also enhance the opportunity for solitude through limiting the number of users at one time.

6. Initiate a visitor information/education program.
 - Install trail registers and regulatory information at three access points -- Amazon Gulch, George Washington Mine and ATOS Mine (see Map 3). Fool's Canyon is a possible portal addition.

Table 9. Recreation Monitoring Standards		
Factor	Indicator	Standard
Trail condition	Erosion, parallel trails, trail widening	None observable
Evidence of camping impact	Fire rings, disturbed vegetation, human waste/trash	None observable; no camping impacts observable beyond a 50-foot radius
Availability of firewood	Amount of observable dead-and-down wood in vicinity	Dead-and-down wood generally available within 100 feet
Human encounters	Number of encounters	No more than five contacts per day during main season of use
Vehicle density at access points	Number of vehicles on regular basis	No more than five vehicles and/or three horse trailers per day during main season of use
Primitive recreation experience/solitude	Number of complaints per year	No more than 10 complaints

- Implement a visitor response system through cards or logs at the trail registers that ask for date of entry, size of party, duration of visit, primitive experience level and suggestions for wilderness management.
- Develop a brochure emphasizing preservation of wilderness characteristics, the "Leave No Trace" ethic, small group size, commercial permit requirements, etc.
- Establish ranger and recreation staff contacts, presenting the same message as the brochure.

Rationale: A visitor information/education program will enable the BLM to inform the public on proper wilderness ethics, regulations and requirements. The visitor response log will provide feedback for more effective management, visitor use and season of use.

7. Conduct monitoring of visitor use.

Rationale: Recreation monitoring is the observation and systematic collection of visitor use data to determine the success of management actions toward achieving the recreation objective. It provides quantifiable data needed to periodically review and evaluate conditions and impacts.

Monitoring

1. The trail system will be monitored annually for condition and existence of new trails.
2. The wilderness will be monitored annually for evidence of camping impacts.
3. Visitor use and permit stipulations will be monitored by ranger and recreation staff.
4. Primitive recreation experiences, encounters and solitude opportunities will be measured through the visitor response system at the trail registers, through staff encounters and through the number of vehicles at access points.

Recreation monitoring standards have been established to measure the effectiveness of the management actions (see Table 9).

Additional Actions, if Required

1. Any new trails observed after the trail inventory is completed will be obliterated immediately for minor trails or within two months of discovery for more established trails.

New trails are defined as routes created/used by visitors that are not part of the trail inventory. These include routes immediately parallel to existing trails, switchback cutoffs, etc. New trails do not refer to paths created by livestock or wildlife.

2. Any campfire rings, trash or human waste observed after the campsite inventory is completed will be removed or buried upon discovery.

3. If camping locations become overutilized and vegetation in the area becomes depleted or damaged, campfires will be prohibited.

4. If visitor encounters and vehicle density regularly exceed standards, a permit system for noncommercial and individual use will be established.

Part VI -- Plan Evaluation

The Phoenix Resource Area, BLM will review the effectiveness of plan implementation on a yearly basis. Monitoring data will be analyzed against standards discussed in Part V for both objectives.

The vegetative monitoring data will indicate whether wilderness natural values are remaining in good condition or need corrective actions. If vegetative conditions show deterioration,

effectiveness of the management actions for the naturalness objective will require reevaluation and will lead to implementation of corrective actions

Trail conditions, camping locations, encounters and visitor feedback will be monitored and evaluated annually. If established standards are exceeded, corrective actions will be implemented.

Part VII -- Implementation Schedule and Cost Estimate

Table 10. Plan Implementation Schedule for Ongoing Projects			
<i>Planned action</i>	<i>Responsible parties</i>	<i>BLM workmonths</i>	<i>Non-labor cost</i>
Monitor key forage and photo plots	Range and/or Recreation staff	0.25/year	\$0
Monitor vegetation damage and maintenance activity impacts	Range and Recreation staff	0.25/year	\$0
Monitor riparian habitat	Wildlife Biologist	0.25/year	\$0
Monitor trail conditions and camping impacts	Recreation staff	0.25/year	\$100/year
Monitor primitive recreation, encounters and solitude	Recreation staff	0.25/year	\$100/year
Patrol wilderness	Law Enforcement and Recreation staff	0.5/year	\$100
Conduct wildlife inventory	Arizona Game and Fish Department	0	\$0

Table 11. Plan Implementation Schedule for Special Activities

<i>Planned action</i>	<i>Responsible parties</i>	<i>BLM workmonths</i>	<i>Non-labor costs</i>
Acquire state lands or provide legal access	Realty staff	2.0	\$0
Produce wilderness brochure	Recreation staff	1.0	\$500
Inventory trails and campsite condition	Recreation staff	0.5/year	\$100/year
Inventory water sources	Water Rights Specialist	1.5/year	\$520/year
Determine potential of aquatic habitat to support species status native fish populations	Wildlife Biologist and Arizona Game and Fish Department	0.5/year	\$0
Adjust livestock season of use, distribution or numbers to achieve riparian habitat goals	Wildlife Biologist and Range staff	1.0/year	\$0
Install trail registers and response log/cards	Recreation staff	1.0	\$1,000
Construct four proposed range developments	Range staff	2	\$40,000

Part VIII -- Public Involvement

The BLM held two public scoping meetings during the summer of 1992 (see Part III) to determine planning issues for this effort. During that period, the BLM received written responses to a public mailing which solicited comment.

The BLM letter of August 17, 1992 requested that interested publics volunteer to serve on a work group to assist the BLM in plan development. An eight-member group first met on January 8, 1993 in Phoenix. Three agencies and three ranching operations were represented. The following groups have been consulted or have provided comment to the BLM during plan development.

Hassayampa River Canyon Public Work Group:

Roy Williams
Carol Williams
Mike Seidman
Richard Wertz
Bob Nuth, Desert Caballeros
Peter Jagow, Arizona Department of
Environmental Quality, Water Quality
David Angel Moralez
Fred Brost
Roy B. Williams
Marie Harber
Michael Huffman
Betty Park
Pete Joachim
Bill Werner
Val Little, The Nature Conservatory
Rhonda L. Cook
Larry Stedman
Bruce Meier
Barbara Heslin, Arizona Game and Fish
Department
Daniel Furnàs
Matt Pierce, Arizona Game and Fish Department
Paul W. Kliewer, MD
Tom Lazzelle

Arizona Game and Fish Department
Yavapai County Sheriff's Office
Desert Caballeros

During preparation of the range development maintenance schedule, BLM Range Conservationists met with the interested livestock permittees. The range development locations and anticipated

maintenance needs were discussed and verified. During these meetings, BLM policies and Congressional guidelines relating to the maintenance of range developments in the wilderness were discussed.

Operators:

Roy and Carol Williams, Jesus Canyon Allotment
Starcrest Inc., JV Bar Allotment
Boyd Tenny, Hozoni Allotment (former)
Rex Maughan, Hozoni Allotment
M.J. Brown, Brown Allotment (former)
Thomas F. Pucci, Brown Allotment
John W. Cooper, Cooper Allotment
Angel Moralez, Moralez Allotment

The Draft Hassayampa River Canyon Wilderness Management Plan and Environmental Assessment was mailed to more than 140 interested individuals, groups and governmental organizations. The document was mailed on March 29, 1996 for the comment period April 1 through May 15, 1996.

Comments

The BLM received three written comments, one each from an individual, a state agency and a Tribal Government.

One comment dealt with vegetation utilization levels allowed by this plan. The BLM's past studies have shown that forage species in this ecosystem remain healthy and vigorous with 50 percent or less utilization. If, however, studies indicate that the long-term trend is going down, the utilization level will be lowered.

Another comment expressed regret that Congress designated this area as wilderness. Only Congress can revoke wilderness designation; therefore, the comment is beyond the scope of this plan.

One comment requested that the BLM pursue inventory of cultural resources on federal lands. The BLM prioritizes its inventory efforts according to resources available to the agency and areas of proposed federal undertakings.

The BLM does not plan to conduct an intensive survey of the Hassayampa River Canyon Wilderness. However, if there are proposed developments or activities in a particular area, the BLM will perform site-specific cultural inventory and clearance.

Part IX -- List of Preparers

The Phoenix Resource Area Wilderness Management Plan Interdisciplinary Team consists of:

Kathryn Pedrick, Supervisor Recreation and Archaeology Staff
William Gibson, Wilderness and Environmental Specialist
Russell Miller, Range Conservationist
Tim Hughes, Wildlife Biologist
Dan Langhorst, Fisheries Biologist
Jim Andersen, Realty Specialist
Ron Smith, Geologist
Connie Stone, Archaeologist
Glenn Joki, Fire Management Officer
Lin Fehlmann, Water Rights
Steve Markman, Hydrologist
Russell Krapf, Soil Scientist
Bob Ruiz, Ranger
Chris Horyza, Supervisor Information Resources Management Staff
Wendell G. Peacock, Writer/Editor

Wilderness plan maps using the Geographic Information System were prepared by:

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Glossary

Accepted uses (formerly known as nonconforming uses): Uses allowed by the Wilderness Act of 1964 that are prior in nature and not necessarily compatible with preserving wilderness values, e.g., mining, livestock grazing.

Biological diversity (biodiversity): Biodiversity is the aggregate of species assemblages (communities), individual species and genetic variation within species and the processes by which these components interact within and among themselves. For classification purposes, biodiversity can be divided into three levels -- community diversity (habitat, ecosystem), species diversity and genetic diversity within species; all three levels change through time.

Ecological (range) site: A characteristic natural plant community which is the product of all the environmental factors responsible for its development.

Functioning at risk: Riparian-wetland areas that are in functional condition but an existing soil, water or vegetation attribute makes them susceptible to degradation (BLM, 1993b).

Proper functioning condition (of riparian habitat): Riparian-wetland areas are functioning properly

when adequate vegetation, landform or large wood debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bedload and aid floodplain development; improve floodwater retention and groundwater recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration and temperature necessary for fish production, waterfowl, breeding and other uses and support greater biodiversity. The functioning condition of riparian-wetland areas is a result of interaction among geology, soil, water and vegetation (BLM, 1993b).

Riparian habitat: An area of land directly influenced by permanent water either on the surface or as free subsurface water within the rooting zone of dependent vegetation. A riparian area has visible present or potential vegetation or physical characteristics reflective of permanent water influence. Typical riparian areas include stream banks and lake shores. Excluded are sites such as ephemeral streams or washes that do not exhibit present or potential vegetation dependent upon free water in the soil.

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Appendix -- Fire Suppression Procedures for the Hassayampa River Canyon Wilderness

Introduction

The fire management procedures provide for:

- fire suppression strategy which ensures protection of wilderness resources, human safety and structures with suppression techniques resulting in the least possible evidence of human activity and
- ensuring a common understanding by Phoenix District personnel of the constraints, considerations and procedures involved with fire suppression operations in the wilderness.

All wildfires within or threatening to enter the wilderness will be extinguished with appropriate suppression response. The fact that a wildfire occurs in the wilderness is not in itself an emergency. An emergency exists when:

- a wildfire burning inside the wilderness threatens human life or property or
- there is a definite potential for a wildfire to exceed suppression efforts, burn beyond the wilderness boundary and endanger human life, property, managed resources or the public welfare.

Appropriate and approved suppression actions are those which:

- ensure protection of wilderness resources,
- provide for protection of human safety and structures,
- result in the least possible evidence of human activity,
- minimize surface disturbance and alterations of the natural landscape,
- are consistent with management objectives and constraints,
- allow for the least possible acreage burned,
- are reasonable and prudent for the time of year, current and predicted fire weather and fire behavior and availability of fire resources and
- minimize fire suppression cost.

Surface disturbance from suppression actions in the wilderness must be rehabilitated to as natural a state as possible.

An escaped fire situation analysis will be prepared to govern all wildfires escaping initial attack.

Suppression facilities, support vehicles and improvements, i.e., temporary fire camps, helispots, staging areas and other sites used for fire suppression activities, must be outside the wilderness, except those that are the minimum necessary to protect life, property, public welfare and wilderness objectives.

Due to the surface disturbance involved and adverse impacts on wilderness values and esthetics, fireline constructed with motorized equipment will be used as a last resort.

Within the constraints defined by this guidance, initial attack suppression actions will be determined by the Initial Attack Incident Commander and Resource Advisor, if available.

The Area Manager will be informed immediately of all wildfires that occur in or threaten the wilderness.

Operating Procedures

Detection

Fire detection methods will have the least permanent impact on wilderness values, such as aircraft overflights. Aerial detection flights should attempt to maintain the FAA airspace advisory of 2,000 feet above ground level over the wilderness.

Initial Attack

Establish ground or aerial reconnaissance and determine:

- fire location, size, rate-of-spread and behavior,
- current and probable fuels, weather and topography, including any natural barriers and
- any threats to life, property or sensitive wilderness resources.

Table 12. Approval Level Needed for Use of Fire Equipment	
Equipment	Approval Level
<i>Air equipment</i>	
Initial attack aircraft and smokejumpers	Incident Commander or Area Manager
Retardant airtankers	Incident Commander or Area Manager
Helicopters	Incident Commander or Area Manager
Aerial ignition systems	Area Manager
<i>Ground equipment</i>	
Portable radio repeaters	Area Manager
Temporary weather stations	Area Manager
Chainsaws	Area Manager
Portable pumps	Area Manager
Fire engines	Area Manager
Support vehicles	Area Manager
Earthmoving equipment	Area Manager
Helispot construction	Area Manager
Spike camps	Area Manager

- any threats to life, property or sensitive wilderness resources.

Send the Initial Attack Incident Commander to the fire.

Inform the Area Manager of the fire.

Send the Resource Advisor to the fire.

Determine/respond with the appropriate initial attack force.

Take actions to control the fire during initial attack.

Complete an escaped fire situation analysis if the fire escapes initial attack.

Escaped Fire Situation Analysis

An escaped fire situation analysis will be prepared immediately for any fire that escapes initial attack. Any fire with flame lengths greater than six feet or a perimeter increasing faster than 18 chains (1,200 feet) per hour will be considered to have

escaped initial attack. The escaped fire situation analysis, used to determine the management strategy for the fire, will be completed by the District Fire Management Officer, Area Manager, Incident Commander and Resource Advisor.

Motorized and Mechanized Equipment

Approval

The Area Manager, or the Incident Commander as noted in Table 12 above, is the minimum level of authority for approving the use of motorized and mechanized equipment in wilderness.

Exceptions

In special or emergency cases involving the health and safety of wilderness visitors or the

protection of wilderness values, aircraft and motorized vehicles and mechanized equipment may be used. In these situations, the Incident Commander should order the resources needed and notify the appropriate line manager on the fire immediately.

The use of power tools (e.g., chainsaws, pumps) and aircraft used in building and holding firelines (e.g., retardant tankers, helicopters with buckets) is pre-approved to facilitate effective initial attack efforts and to minimize the need to locate line managers on short notice if:

- flame lengths exceed four feet or
- perimeter growth exceeds 12 chains (800 feet) per hour in grass fuels or one chain (66 feet) per hour in brush/shrub fuels.

The use of these tools will be immediately reported by the Incident Commander to the Area Manager through the District Fire Manager Officer.

Tactical Considerations

Planning

Emphasize the BLM minimum tool policy.

Evaluate suppression tactics during each planning and strategy session to ensure that they meet the objectives for the wilderness.

Include the BLM Wilderness Resource Advisor and other affected agency representatives in all planning and strategy sessions.

Emphasize the need to protect habitat for sensitive species, including federally listed threatened or endangered species.

Allow logs and snags to burn rather than be sawed or felled.

Assess and request early in the incident the need for an archaeologist or additional wilderness advisors.

Line Construction and Holding

Whenever possible, avoid the use of scratch lines. Use natural barriers as much as possible in fireline construction. Locate firelines to take advantage of natural barriers, rock outcroppings, trails, streams, etc.

Firelines will be no wider than absolutely necessary to stop the spread of the fire.

Place the fireline as close to the fire as possible.

Limbing of trees along the fireline will be done only as necessary for suppression efforts or for firefighter safety.

If unburned material is left within the fireline, all such material will be felt/tested with bare hands to assure that no sparks or glowing embers remain.

Burning snags or trees will only be felled when they may fall across the fireline or endanger firefighters. If possible, they will be allowed to burn naturally.

Spot fires will be flagged and/or signed from a main fire.

A flagged line from the fire to the nearest road or trail will be left for checking purposes. This line will be removed by whomever checks the fire.

Single engine airtankers with the capacity of 350 to 400 gallons of water, foam or fugitive fire retardant have been very effective in light to moderate fuel types. The use of this fire suppression resource in both initial attack and mop up will be considered.

Trees are minimal in number and provide sensitive wildlife habitat in the wilderness. Only those absolutely necessary for line construction will be cut.

Logistics

Use the long line or remote hook in lieu of constructing new helispots to deliver and retrieve gear. Emphasize the use of natural openings.

Emphasize the use of mule pack strings to resupply fire crews.

Emphasize the use of "no trace" camps.

Consider the use of rappelling operations.

Crews will stay on existing trails, whenever possible.

Base camps are prohibited in the wilderness.

Spike camps in the wilderness are discouraged; if possible, place them outside the wilderness. Evaluate the location of and need for spike camps daily.

If spike camps are approved for use in wilderness:

- use low-impact "no trace" camping techniques, site selection and site use,
- use existing campsites, if available,
- if existing campsites are not available, select campsites unlikely to be observed by visitors,
- select impact-resistant sites such as rocky or sandy soils, avoiding sites along streams,
- change camp location if ground vegetation in or around the camp shows signs of excessive use,
- do minimal disturbance to the land in preparing sleeping and cooking areas,
- campfires are not allowed,

- do not clear vegetation or dig trenches for sleeping areas,
- toilet sites should be a minimum of 200 feet from any water source; holes must be dug six to eight inches deep,
- select alternate travel routes between camp and the fire if trail wear becomes excessive and
- restore the campsite area to as natural a condition as possible.

Documentation

A memorandum documenting fire support actions shall be completed immediately after the fire by the Area Manager and signed by the District Manager. Copies will be filed in the Hassayampa River Canyon Wilderness file.

As a minimum, the memorandum shall contain:

- the name, number and date of the fire,
- the resource area and wilderness involved,
- the names of the Incident Commander, Wilderness Resource Advisor and Area Manager,
- rationale for actions which may have long-term impacts on wilderness values,
- a description of any motorized vehicle used, the date it was used, specific reason for use and nature of the emergency,

- a description of fire suppression actions taken in the wilderness,
- the specific location and description of the work done,
- rehabilitation action planned and completed to restore the work area to as natural an appearance as possible,
- the date a request was made for use of a motorized vehicle and approved by the Area Manager,
- the date the State Director was informed of the fire and mechanized use and
- any other significant information.

Rehabilitation

Emphasize to all fire personnel the need to remove all signs of human activity.

Pack out all garbage.

Fill in deep, wide firelines and trenches.

Use waterbars or grade dips as necessary to prevent erosion.

Ensure that stumps from trees and large brush are cut flush with the ground.

Any trees or large brush cut during fireline construction should be scattered to appear natural.

Restore helicopter landing sites.

Cover or fill in latrine sites.

Environmental Assessment

Introduction

Purpose and Need

The Federal Land Policy and Management Act of 1976 (Public Law 94-579) directed the BLM per Section 603 to identify "roadless" areas to be evaluated for suitability for wilderness designation. The Hassayampa River Canyon Wilderness was so designated by Congress on November 28, 1990 in passing the Arizona Desert Wilderness Act (Public Law 101-628). The Wilderness Act of 1964 (Public Law 88-577) provides the framework of wilderness management. Designated areas will be managed for the preservation of wilderness character, visitor use and accepted (nonconforming) uses, utilizing the minimum tool. BLM Manual 8560 and 8561 provide for the development of individual wilderness management plans.

Conformance to Land Use Plans

The proposed action and alternatives conform to the *Lower Gila North Management Framework Plan* (BLM, 1983) and tiers to the *Phoenix Final Resource Management Plan/Environmental Impact Statement* (BLM, 1988b), page 15 (record of decision signed in 1989).

Relationship to Statutes, Regulations and Other Plans

The *Upper Sonoran Final Wilderness Environmental Impact Statement* (BLM, 1987) presented a study on the feasibility of placing the Hassayampa River Canyon Wilderness Study Area into the National Wilderness Preservation System. Although Hassayampa River Canyon was recommended as unsuitable, Congress designated it as wilderness. The Hassayampa River Canyon Wilderness Management Plan focuses on the BLM's management of wilderness values, visitor use, use of minimum tool and allowed usage, fulfilling BLM Manual requirement 8560.04D to issue wilderness management plans.

Description of the Proposed Action and Alternatives

Two management plan alternatives have been proposed for consideration in the Hassayampa River Canyon Wilderness Management Plan. Alternative A was developed by the resource area's interdisciplinary team with assistance from the Hassayampa River Canyon Wilderness Public Work Group. Alternative B is the no action (current management) alternative (see Table 13).

Alternative A -- Proposed Action

The proposed action is the Hassayampa River Canyon Draft Wilderness Management Plan described in Part V. This alternative is designed to perpetuate the excellent qualities of naturalness and primitive recreation opportunities that the Hassayampa River Canyon offers the visitor. Planned actions include restrictions on group usage and identification and protection of critical resource values.

Alternative B -- No Action (Current Management)

Alternative B provides only for administrative actions. Vegetative utilization would not be studied or necessary protective measures implemented. No proactive management designed to study or provide for visitor use will be implemented. The actions are more reactive in nature and adhere to law and BLM policy.

Affected Environment

See Part I, General Management Situation.

The Hassayampa River Canyon Wilderness, on the southern flank of the Weaver Mountains, consists of the deep river gorge with numerous side canyons and washes and rugged, highly dissected mountains. Vegetation is Sonoran desertscrub, interior chaparral and Sonoran riparian deciduous woodland.

Table 13. Comparison of Alternatives		
	Alternative A – Proposed Action	Alternative B – No Action
OBJECTIVE 1: Naturalness		
1. Upland forage utilization	Not to exceed 50 percent	No monitoring of utilization
2. Riparian condition	All in proper functioning condition by 2005	No actions to improve functioning condition
3. New facilities, fences and wells	Regulate riparian use by livestock	No new developments
4. Fire suppression	Full suppression of fire; no prescribed burn	Same as under Alternative A
5. Land acquisition and/or access	Protects wilderness values from development of state land	Inholding remains state land; the BLM would permit adequate access, if requested
6. Firewood use	Down-and-dead use only	Same as under Alternative A
7. Revegetation	Allows for revegetation of former vehicle routes	Same as under Alternative A
8. Facility maintenance	Allows for maintenance of range developments using minimum tool	Same as under Alternative A
9. Wildlife inventory	Allows for assessment of populations by flights	Same as under Alternative A
10. Vegetation monitoring	Allows for assessment of impacts on vegetation	No assessment
OBJECTIVE 2: Recreation Opportunities		
1. Trail inventory	Inventories existing trails; documents condition	No trail data compiled
2. Maintain existing trails	Allows for periodic minor maintenance	No trail maintenance
3. Campsite inventory	Inventories existing campsite condition	No campsite data compiled
4. Commercial permits	Visitor numbers limited	No visitor limitation
5. Noncommercial recreation	Regulates large groups	Large groups unregulated
6. Public education	The BLM will produce a wilderness brochure available at public request	No brochure produced; no trail registers installed
7. Visitor use monitoring	Allows for assessment of recreation impacts	No assessment

Four special status wildlife species are known to inhabit the area and two others may occur there. Big game species include mule deer, javelina, mountain lion and black bear.

The Hassayampa River Canyon Wilderness Area is not habitat for any listed threatened, endangered or proposed species of plant or wildlife including the southwestern willow flycatcher (*Empidonax traillii extimas*).

Portions of six grazing allotments are within the wilderness boundaries. An allotment management plan exists for one of these.

Outstanding opportunities exist for solitude and primitive recreation throughout much of the wilderness due to rugged topography. Trails provide access to spectacular views of pristine Sonoran Desert canyons.

This wilderness includes two parcels of state land inholdings totalling 440 acres, which also possess significant wilderness values.

Environmental Impacts

The resources considered and found to be unaffected by the proposed action and alternatives are:

- prime and unique farmlands,
- floodplains,
- cultural resources,
- air quality,
- Native American religious issues and traditional uses,
- hazardous waste,
- threatened and endangered species and
- areas of critical environmental concern.

Wild and scenic river designation is currently being considered for the Hassayampa River. It has been recommended as nonsuitable by the BLM (BLM, 1994).

Alternative A -- Proposed Action

Impacts to Wildlife

Potential damage to habitat due to livestock and recreational use will be monitored and corrective actions pursued as necessary. Restoration of native fish species through reintroduction would take place where feasible. Good ecological condition will be maintained or improved.

Impacts to Riparian Habitat

Riparian functioning condition will improve. Livestock will be prohibited from the Hassayampa River Canyon during the growing season, allowing the vegetation to recover.

Impacts to Soil and Water

Recreational activities would have a slight negative impact to certain use areas, which would receive the focus of activities. Areas along trails, especially camping spots, would receive some trampling and vegetation loss. Since these activities would be almost totally confined to the trails, the remainder of the wilderness should remain pristine.

Water sources will receive slight negative impact to quality due to human visitation.

Improvement of riparian vegetation will decrease soil loss.

Impacts to Vegetation

Vegetation communities will benefit as forage and browse utilization limits allow for maintenance of a healthy ecosystem. Full suppression of wildfire, if detected and extinguished promptly, will discourage degradation of the Sonoran desertscrub. Live mesquite, ironwood and paloverde trees will be protected as wilderness visitors confine firewood usage to dead-and-down fuels. Riparian vegetation will increase in mass and diversity.

Adverse residual effects of state inholding development will be avoided upon its acquisition. Motorized access would not be necessary through sensitive desert vegetation. Desert vegetation in that parcel as well as those adjoining parcels would not be affected by development.

Since recreational impacts will be monitored closely, negative human impacts from camping and hiking will be detected. High use areas exhibiting decline in condition can be repaired if attended to promptly.

Impacts to Range Management

Results of vegetation monitoring could lead to the reduction of cattle animal use months or at least prevent the increase of present numbers.

Implementing a maintenance schedule for range developments will allow continued routine maintenance, which in turn will support efficient livestock management. Implementing a riparian rest plan could change the management practices of the allotments.

Impacts to Mining

Claimants will not be able to use mechanized or motorized equipment in their operations until a mining plan is approved. Should a validity examination find any claim to be valid, an approved plan of operations would stipulate use of motorized/mechanized equipment.

Impacts to Recreation

More efficient management would be both the immediate and long-term effects of the action proposed under Alternative A. The inventory of existing trails, public education efforts and providing a brochure to wilderness visitors will help to maintain or enhance the wilderness values.

Impacts to Wilderness Values

The procedures proposed for special recreation permits and group size limits would help maintain the levels of solitude by regulating the effects of commercial services and large group sizes on opportunities for solitude. Monitoring would allow timely responses to circumstances that are incompatible with the desired social setting.

Acquisition of a 440-acre state inholding will preserve the wilderness values as a contiguous unit, assuring that this parcel will not be developed.

Proposed developments (see Table 4) and implementation of the range development maintenance schedule (see Table 5) will have negative, albeit temporary, impacts to the wilderness experience. Using a tractor to bring in materials to repair the Cooper Fence gate would leave up to .75 miles of tracks in the river bed. The next area rainstorm would remove the temporary vehicle tracks. Some minimal vegetative disturbance will occur on either side of the river as a result of these repairs. The noise impacts of the operation would last no longer than the several hours it would take to repair the gate. A helicopter, if needed, will deliver supplies for one proposed fence. Noise impacts from this operation would be limited to less than one-half day.

Using a four-wheel-drive truck to haul materials to repair the windmill would leave up to 0.5 miles of tracks in the wash from the wilderness boundary to the windmill. The next area rainstorm would remove the temporary vehicle tracks. The noise impacts of the vehicle would last no longer than the driving time to the site.

The impacts of the noise of chainsaws used during major fence repair would be intermittent, temporary and last no longer than the several hours it would take to complete fence repair. These repairs are not expected to occur more than once every five years for each of the six project fences.

The impacts of noise on opportunities for solitude will be minimized through scheduling vehicle and equipment use for weekdays when visitor use is expected to be lower.

Cumulative Impacts

Long-term impacts of plan implementation should be positive for wilderness values of solitude and naturalness. The area will continue to provide an oasis of beauty and pristine vistas as the BLM closely monitors visitation and vegetative impacts of that visitation in addition to the allowed resource uses. Areas of degradation, including the Hassayampa River Canyon, should heal. Areas of continued use will be closed if necessary to allow the healing process to evolve.

Economic impacts of this wilderness plan to the local community are expected to be minimal. There will be opportunity for outfitters to profit from wilderness guiding.

Social impacts to the community will be minimal, as the nearest town is 16 road miles away.

Mitigation Measures

The following measures will be implemented to lessen impacts of certain allowed, but incompatible, uses within the wilderness.

1. Authorized maintenance to range developments will be conducted during low use times, i.e., during the week, rather than on weekends.
2. Removal of livestock if forage and browse overuse are determined to be a direct result of these animals.
3. Obliteration of new trails and campfire rings and removal of trash.
4. Campfire restrictions will be implemented if vegetation overutilization becomes a problem.
5. A permit system will be implemented if visitor use exceeds established standards.
6. At the conclusion of mining done under a valid plan of operations, disturbed areas will be restored to as closely a natural state as possible.

Residual Impacts

Infrequently, aircraft and ground vehicles perform authorized work in the wilderness, disrupting the solitude of the wilderness visitor.

Alternative B -- No Action (Current Management)

Impacts to Wildlife

Potential habitat degradation may go undetected and unresolved, resulting in negative impacts.

Impacts to Riparian Habitat

Condition may remain static or take longer to improve due to potential impacts of livestock grazing.

Impacts to Soil and Water

There will be no vegetative or recreational monitoring programs to evaluate soil condition in potential heavy use areas. Negative impacts could begin and progress unimpeded.

Water quality could degrade if no action is taken in response to downtrend in the annual studies.

There will be no riparian pasture plan to improve vegetation condition and thus reduce soil erosion.

Impacts to Vegetation

Vegetation communities would not be monitored with the frequency and detail needed to determine if healthy ecological conditions are being maintained. Potential overuse may lead to deterioration of vegetation communities. Full suppression of wildfire will discourage degradation of the Sonoran desertscrub if fires are detected and extinguished promptly. Recreational use of live mesquite, ironwood or paloverde would destroy portions of the habitat.

Adverse residual effects of state inholding development will have a direct negative effect on surrounding wilderness lands. Wilderness values could be compromised if vegetation communities suffer from overuse and degradation caused by increased usage on the adjacent parcel. Authorized motorized access would be necessary through sensitive desert vegetation.

Any negative human impacts from camping and hiking would be undetected by BLM personnel unless reported by the public. High use areas exhibiting decline in condition would deteriorate from increased unregulated visitor use.

Impacts to Range Management

The Jesus Canyon, JV Bar and Cooper allotments would be hindered by not permitting the occasional use of motorized or mechanized equipment within the wilderness. Replacement of the Cooper Fence gate without the use of a tractor or other motorized means would be cumbersome and time-consuming. Similarly, the replacement of fence posts without the use of chainsaws would be time-consuming. Finally, transporting replacement materials (e.g., metal tanks) for the ATOS windmill by nonmotorized means would be extremely difficult.

Impacts to Mining

Same as under the proposed action.

Impacts to Recreation

The unmonitored and uncontrolled use of the area would detract from wilderness recreation opportunities. Trails would neither be mapped nor maintained and accurate information about the area would not be made available to the public.

Impacts to Wilderness Values

Wilderness values would likely deteriorate under Alternative B. Unauthorized uses of the wilderness would not be well controlled and would eventually detract from the values of solitude and wilderness character.

Failure to acquire the 440-acre state inholding will allow the potential for development. Such development would mar the surrounding scenic wilderness values, adversely affecting solitude in those areas of the wilderness adjacent to state lands. The BLM may be required to provide legal access to the inholding which could result in a degradation of wilderness characteristics.

Conducting maintenance and inspection of range developments on foot or horseback would not result in significant adverse impacts to wilderness values of solitude and naturalness.

Cumulative Impacts

Wilderness values of naturalness and solitude would probably deteriorate, especially given the long-term expectation of increased visitor use. The BLM would not be monitoring such use or controlling points of entry.

Unregulated wilderness use by large numbers of visitors will degrade vegetation and soils in the more popular areas.

The primary livestock operators in the wilderness would suffer economically due to inefficiencies created by limited means of access to vital range developments.

Potential economic benefits to outfitters would not be realized as no commercial permits would be issued for the wilderness.

Mitigation Measures

The following measures will be implemented to lessen impacts of certain allowed, but incompatible, uses within the wilderness.

1. Authorized maintenance to range developments will be conducted during low use times, i.e., during the week, rather than on weekends.

2. At the conclusion of mining done under a valid plan of operations, disturbed areas will be restored to as closely a natural state as possible.

Residual Impacts

Infrequently, aircraft and ground vehicles perform authorized work in the wilderness, disrupting the solitude of the wilderness visitor.

Consultation and Coordination

See Part VIII of this plan.

Finding of No Significant Impact/Decision Record

Hassayampa River Canyon Wilderness Management Plan

Environmental Assessment AZ-024-95-003

Case File AZA 25479

Decision: It is my decision to approve the Hassayampa River Canyon Wilderness Management Plan. The plan establishes management direction for the Hassayampa River Canyon Wilderness for at least 10 years.

Finding of No Significant Impact: Based on the analysis of potential environmental impacts contained in the attached environmental assessment, I have determined that impacts are not expected to be significant. An environmental impact statement is not required.

Rationale for Decision: The plan provides for the continued maintenance of wilderness values and closely monitors recreational use of the Hassayampa River Canyon Wilderness. Routine monitoring and yearly evaluations provide for modifications to the plan should a change in conditions occur.

Other Alternatives Considered: The proposed action and the no action alternative were considered.

Mitigation/Stipulations: Mitigative measures are incorporated in the proposed action.

Recommended by: Lee Higgins acting 6.27.96
Area Manager, Phoenix Resource Area Date

Recommended by: Michael K. Cooper 6/27/96
District Manager, Phoenix District Date

Approved by: Lorna Deal 6/27/96
State Director, Arizona Date

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