

RESOURCE INFORMATION REPORT

POTENTIAL WILD • SCENIC • RECREATIONAL RIVER DESIGNATION

National Forests of Arizona



United States
Department of
Agriculture



Prepared By
Forest
Service

Southwestern
Region
September, 1993

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INTRODUCTION

This report provides resource information for potential wild, scenic, and recreational rivers on six National Forests in Arizona. It is based upon the January, 1993, *Preliminary Analysis of Eligibility and Classification for Wild/Scenic/Recreational River Designation* report. This resource information was compiled for rivers which the Forest Service determined to be potentially eligible for inclusion into the National Wild and Scenic Rivers System. (1)

Information provided includes location, preliminary eligibility and classification, descriptions of resources, outstandingly remarkable values, land uses and developments, and social and economic values. This information was obtained from the best available sources, including the Forest Service, the Arizona Game and Fish Department, and other state and federal agencies. Representatives from the Apache-Sitgreaves, Coconino, Coronado, Kaibab, Prescott, and Tonto National Forests, and the Arizona Game & Fish Department compiled this information.

This report is organized by river basin. Each river section contains:

- 1) a map showing the river segment(s) with a one-half mile wide corridor, and
- 2) the resource information for the river segment(s).

The Table of Contents includes a two-letter code for the National Forests which administer the river segments. The codes are:

Apache-Sitgreaves - AS
Coconino - CC
Coronado - CR

Kaibab - KA
Prescott - PR
Tonto - TO

(1) Marijilda Creek, located in the Upper Gila River Basin on the Coronado National Forest, was identified as potentially eligible in the original report. However, since that time the free-flowing portion of the segment was re-evaluated and redefined due to the existence of a major water diversion. This resulted in elimination of the portion containing the outstandingly remarkable cultural values previously identified in the portion below the diversion. No other outstandingly remarkable values were identified for the remaining free-flowing portion, therefore it was dropped from the potentially eligible list.

GLOSSARY

AF(A) - Acre Feet (Annually)

ASQ - Allowable Sale Quantity

AUM - Animal Unit Month

CFS - Cubic Feet per Second

CG - Campground

FLRMP (LMP) - Forest *Land* and Resource *Management Plan*

FR - Forest Road

MA - Management Area

NAAQS - National Ambient Air Quality Standards

ORV - Outstandingly Remarkable Value

PAOT - Persons/People At One Time

(M)RVD - (Thousand) Recreation Visitor Days

STORET - EPA Water Quality Data Base ("*Storage and Retrieval*")

TES, T&E - Threatened, Endangered, and Forest Service Sensitive Species

RIVER BASIN MAP





5

Fredonia

89

309

Jacob
Lake

87

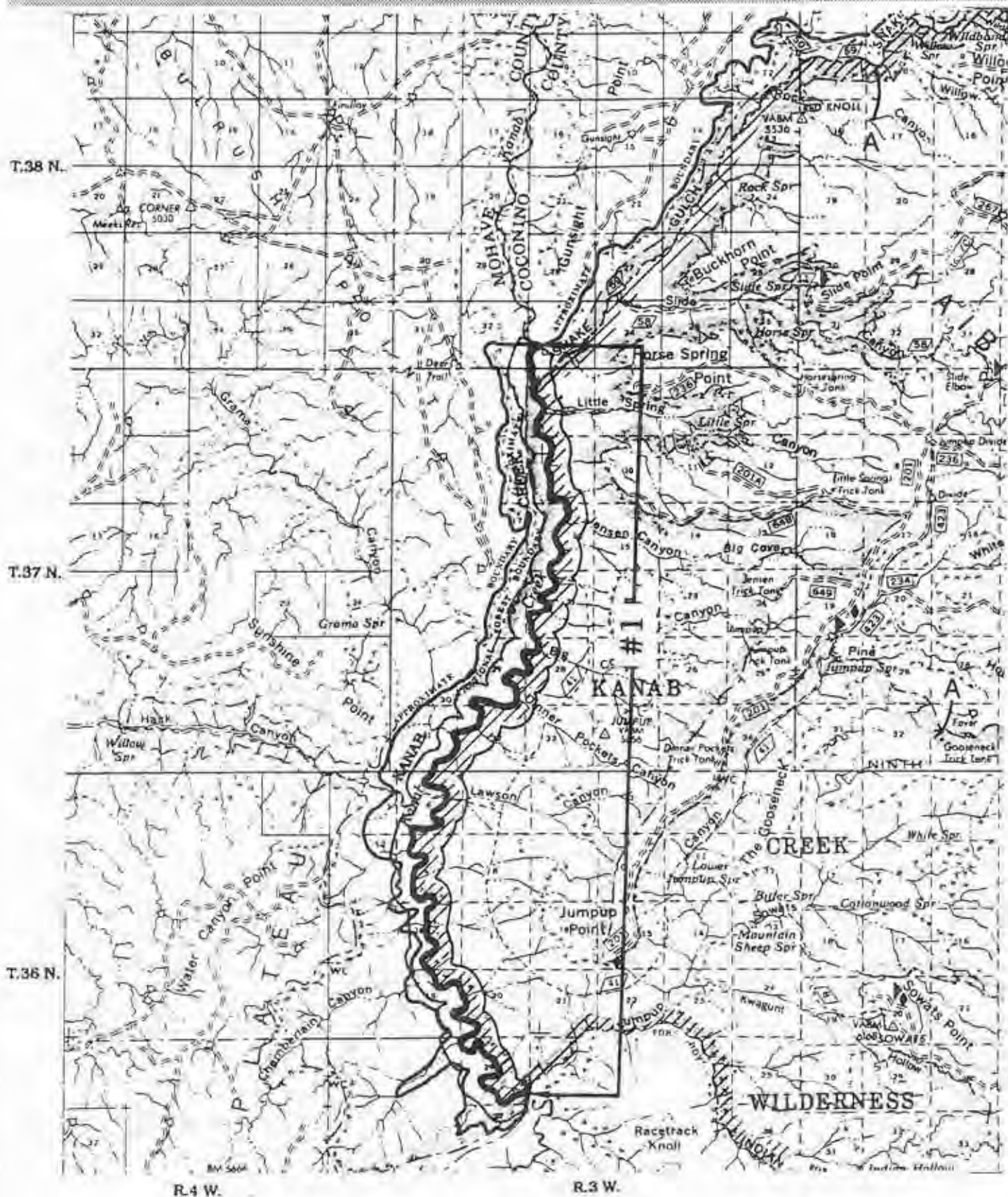
Kanab
Creek

North Rim

COLORADO RIVER BASIN

KANAB CREEK

KANAB CREEK



KANAB CREEK

LOCATION

Kanab Creek, Coconino/Mohave County, Kaibab National Forest.

Kanab Creek system totals approximately 120 miles originating in Utah, northeast of Alton. Kanab Creek flows southwesterly 38 miles to the Arizona border and continues in a southerly direction approximately 72 miles to its confluence with the Colorado River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Segment Found Potentially Eligible for Designation:

Approximately 19.7 miles of Kanab Creek were evaluated by the Forest Service for potential designation as a Wild and Scenic River. This almost 20 mile stretch of Kanab Creek is on the Kaibab National Forest.

Eligible Segment - Kanab Creek

- 19.7 miles
- FS/BLM boundary line on the north to the FS/NPS boundary line on the south.

Eligibility:

Kanab Creek is freeflowing and without significant impoundments or diversions. There is one flood gate installed on the south end of a private land parcel.

Outstandingly Remarkable Values

Scenic
Recreation
Wildlife
Geology

Classification

Wild

The total river corridor (1/4 mile on each side) includes 5,305 acres, of which the Forest Service administers approximately 98 percent.

DESCRIPTION OF RESOURCES AND VALUES

Geology: This segment of Kanab Creek flows at the bottom of a canyon that gets deeper to the south and its confluence with the Colorado River. The upper portion, approximately 2 miles, of the canyon is broad with the upper rims visible. The remaining 18 miles is a narrowing canyon as the creek cuts down through more rock layers. Kanab Creek is a side canyon to the Grand Canyon. Kanab Creek cuts through the Supai Group, all four formations in the group. It also spans the Pennsylvanian and the older Permian layers. The Supai Group forms unique sandstone balanced rocks and outcrops, in addition to seeps and springs. In some locations along the creek you can see the Kaibab Limestone, Toroweap Formation, Coconino Sandstone, and Hermit Shale. Unique geologic features such as canyon walls and exposure of numerous rock layers constitute an outstandingly remarkable value.

Streamflow and Water Quality: Streamflow: Intermittent with short perennial stretches fed by springs and subsurface water flow encountering a shale pan or rock layer. Data available upstream at the Johnson creek confluence shows 403 AF (acre feet) average annual runoff. Annual runoff for lower Kanab Creek watershed is 749 AF with 80 percent (547 AF) occurring during the winter months of October to April. Relic riparian areas indicate the creek historically flowed for longer periods during the year and possibly flowed year round. Flow occurs through the Forest segment only during heavy spring runoff. From mid to late spring through December, only small ponds of water are found. Water Quality: Water samples collected in the vicinity of the confluence of Kanab Creek and Hack Canyon indicates water quality meets standards set by Arizona for wildlife and livestock, except sometimes for turbidity. No data is available to determine if Kanab Creek meets Arizona standards for recreational or domestic uses.

Vegetation: TES SPECIES: no known species have been identified in the 1/2 mile corridor. However, Pediocactus peeblesianus ficksenianus (Ficksen pincushion cactus) and Rosa stellata abyssus (Grand Canyon rose) are known to occur in the area outside the 1/2 mile corridor.

Kanab Creek canyon consists of three vegetation zones: riparian, benches and bottomlands, and slopes. The riparian zone was disturbed historically by excessive livestock use 70 to 100 years ago converting a healthy riparian zone of deep-rooted species to shallow-rooted species associated with a shallow or non-existent water table and secondary succession. Native species currently present include intermittent stretches of cottonwood or willow with some sedge and rush understory. Tamarisk (salt cedar) has invaded a large portion of the riparian zone. The drier benches and bottomlands are primarily a shrub/grass zone including catclaw acacia, shrub live oak, yucca, prickly-pear, snakeweed, big sagebrush, four-wing saltbush, shadscale, and rabbitbrush. Grasses include galleta, sand dropseed, needle-and-thread grass, indian rice grass, and desert needlegrass. The slopes are primarily a shrub/grass community. Shrubs include black-brush, Mormon tea, snakeweed, buffalo-berry, squaw bush, baccharis, algerita, apache plume, agave, beargrass, and prickly pear. Grasses include galleta, indian rice grass, needle-and-thread grass, desert needlegrass and some wheatgrass on upper slopes. No timber species are present in Kanab Creek canyon.

Fisheries and Wildlife: TES SPECIES: spotted bat (Euderma maculatum) and American peregrine falcon (Falco peregrinus anatum) are known to occur within 1/2 mile of the proposed creek segment. A documented sighting of Mexican spotted owl (Strix occidentalis lucida) has occurred in the creek corridor.

Fisheries: The intermittent flow in Kanab Creek does not support any known fish populations. **Wildlife:** A variety of wildlife species inhabit and are dependent upon Kanab Creek. Mule deer move into the canyon during the winter months from the Kaibab Plateau to the east. Kanab Creek supports a healthy breeding population of peregrine falcon. Desert bighorn sheep have been reintroduced into lower portions of Kanab Creek. Other species dependent of Kanab Creek flows and riparian habitat include numerous birds, bats, rodents, and reptiles. Migratory birds and raptors, such as the golden eagle, rely on the river corridor for food, water, and nesting habitat. The river corridor provides dispersal habitat for the Mexican spotted owl.

The known presence of listed species constitute an outstandingly remarkable value.

Visual Resources: Kanab Creek is a side canyon to the Grand Canyon and has many of its scenic qualities, including a diversity of colors, textures, forms and lines. Contrasts in colors are created between the rocks and vegetation. The scenery can be enjoyed from rim viewpoints or trails within the canyon. The variety and dramatic nature constitutes an outstandingly remarkable value.

Cultural and Historical Resources: Evidence of human presence has been identified to about 4000 BC based on survey of 5 miles of Kanab Creek. Prehistoric sites include rock art panels, granaries, camps, rock shelters, and artifact scatters with rock art panels being the most common. Archaic, Basketmaker and Anasazi periods are represented along Kanab Creek with Pueblo II times accounting for most of the sites. Preliminary survey has identified at least 5 sites which are potentially eligible for nomination to the National Register of Historic Places.

The first Euro-Americans in Kanab Creek were probably the members of the second Powell expedition in 1871. This group floated the Colorado River from Lee's Ferry to the mouth of Kanab Creek and used the natural route to exit the Grand Canyon. Prospectors and cattlemen also used the area during the end of the 19th century. Kanab Creek and its major tributaries provided an important network of routes for moving livestock between winter and summer ranges. "Cowboy camps" and drift fences along the creek are evidence of this era.

LAND USES AND DEVELOPMENT

Land Ownership: The creek is located in the Kaibab National Forest. There is one private parcel the Forest Service is in the process of purchasing. The parcel includes about 60 acres (about 1/2 river miles) along the east bank of Kanab Creek. The remaining 9,140 acres (about 19 river miles) is in the National Forest.

Water Rights and Water Resource Developments: The State of Utah has appropriated 57,195 AFA (acre feet annually) in the upper Kanab Creek watershed. This includes 1400 acres in agricultural use appropriating 8400 AFA during the growing season. The Kaibab National Forest has rights for 1176 AFA in the lower Kanab Creek watershed. There are no appropriated water rights downstream of the Forest boundary. There are no existing data for historical or current instream flows. Relic riparian areas and soil profiles indicate Kanab Creek had higher flows. There are no diversions, dams or dikes in the Forest portion of Kanab Creek. There are several diversions and other structures upstream north of the Forest. There is one existing flood gate on the south end of the private parcel. However, the Forest Service is purchasing the parcel and the gate may be removed.

Transportation Facilities: Access to Kanab Creek is very limited. There is non-mechanized access only to the river corridor. Trails #59, 41, 11, 8, and 58 and Hack Canyon trail access Kanab Creek. Trailheads are accessed from FRs 422, 423, 425a, 233, 235, 267, and 267c, and BLM roads 1048, 109, and 1010. Only the BLM road access in Hack Canyon is open in the winter months. These Forest Service and BLM roads are accessed off U.S. Highway 89a or Arizona State Route 389.

Recreation Activities: Recreation use along Kanab Creek is low due to the difficult access to the area. There are no developed sites in the corridor. Recreation activities are limited to hiking, backpacking, and horseback riding. The quality of the wilderness experience is very high. The hiking or backpacking experience is similar to the Grand Canyon with trails in canyons or on open esplanades. However, since Kanab Creek canyon is smaller scale than the Grand Canyon, does not require permits and is less regulated, the recreation opportunity in the corridor is outstanding and constitutes an outstandingly remarkable value.

Current Special Management Designations: The Kanab Creek corridor is in the Kanab Creek wilderness area. The majority of the Forest Service portion (99 percent) is in the designated wilderness area. The corridor is also in the Grand Canyon National Game Preserve. Kanab Creek forms the western boundary of the Game Preserve. The short segment (about 1 mile) of Kanab Creek north of the confluence with Snake Gulch is not included in either special designation area. The east bank of the creek is in the private parcel and the west bank is in the National Forest.

Mining: There are currently no mining activities in operation or proposed in the Kanab Creek corridor. A moderate resource potential for uranium, copper and other metals are known to exist in the area. The geologic formations containing these minerals are near the boundary of the wilderness. Two significant mineral-bearing formations have been located west of Kanab Creek.

The special management designations described above preclude entry for mining locatable minerals. There is a small strip of land along the western escarpment of Kanab Creek that remains open to mineral entry as it is outside the wilderness and Game Preserve designated areas and within the National Forest. This strip of land varies from several hundred feet to 1/2 mile in width and a small portion of this is within the 1/4 mile corridor to the west of Kanab Creek. There are over 150 mining claims located in the vicinity of this strip of land so some of these claims may be in the river corridor.

Underground uranium mining is planned or under way for several areas west of the wilderness boundary. Access to these mining operations is from the BLM lands west and north of the wilderness, so activities are not visible from the river corridor.

There are no oil and gas leases in the Kanab Creek corridor.

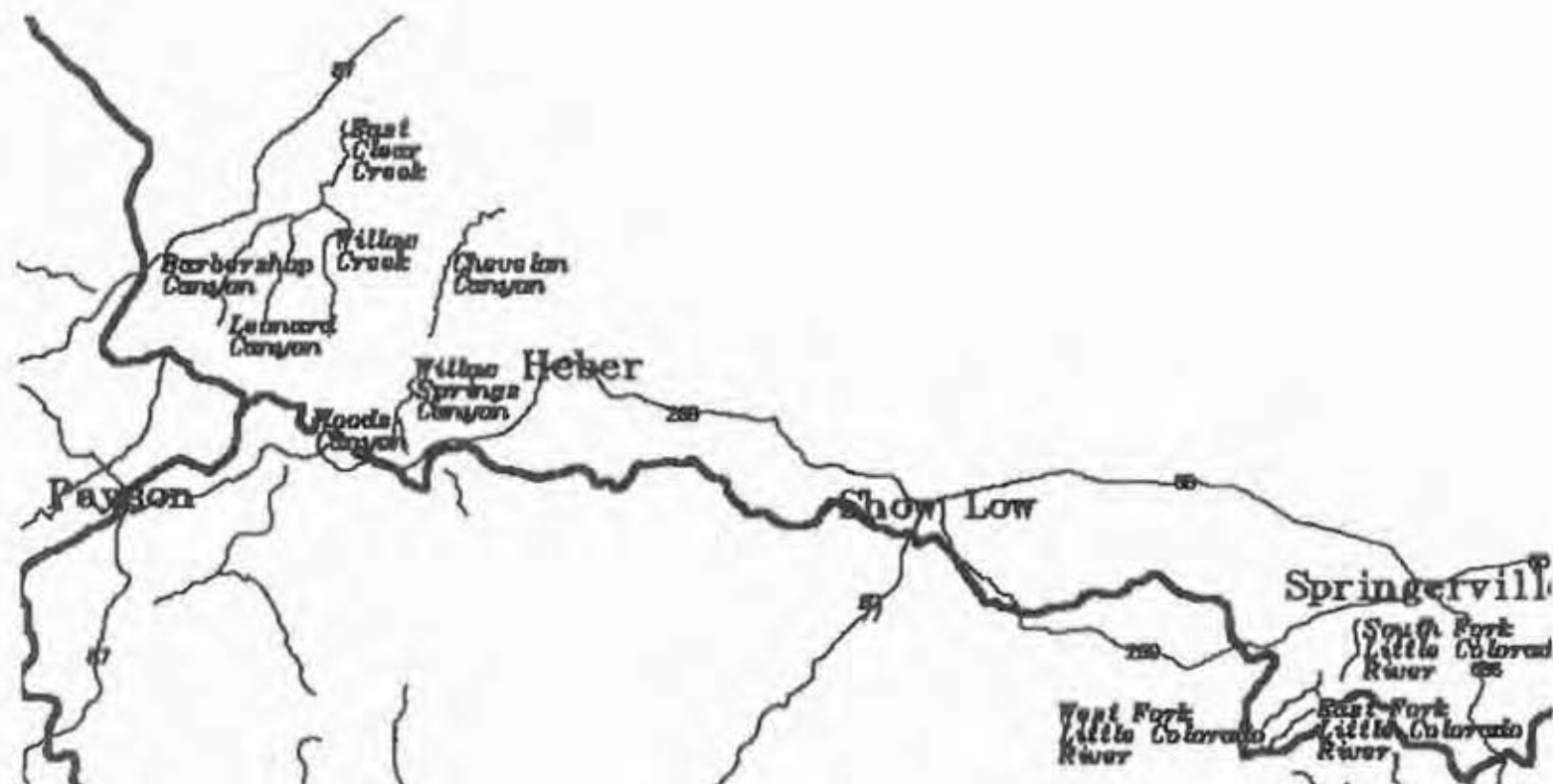
Special Land Uses: There are no permitted facilities in the Kanab Creek corridor. Several special use permits are issued each year for commercial outdoor groups to take backpacking trips into Kanab Creek wilderness area that may include travel in the Kanab Creek corridor. These groups have been the National Outdoor Leadership School and the National Sierra Club.

Livestock Grazing and Agriculture: The Kanab Creek corridor is within the Kanab Creek allotment. There are 48 head of cattle authorized to graze on the Allotment from November 16 to April 15 (242 Head Months annually). There are no range headquarters in the corridor. Range improvements include 3 fences that cross the corridor. The private parcel has several improvements including 2 cabins/shed, fence, cistern, and water pipeline. Some of these improvements may be in the corridor.

Timber Harvest: There are no suitable timber lands in the corridor.

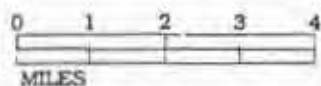
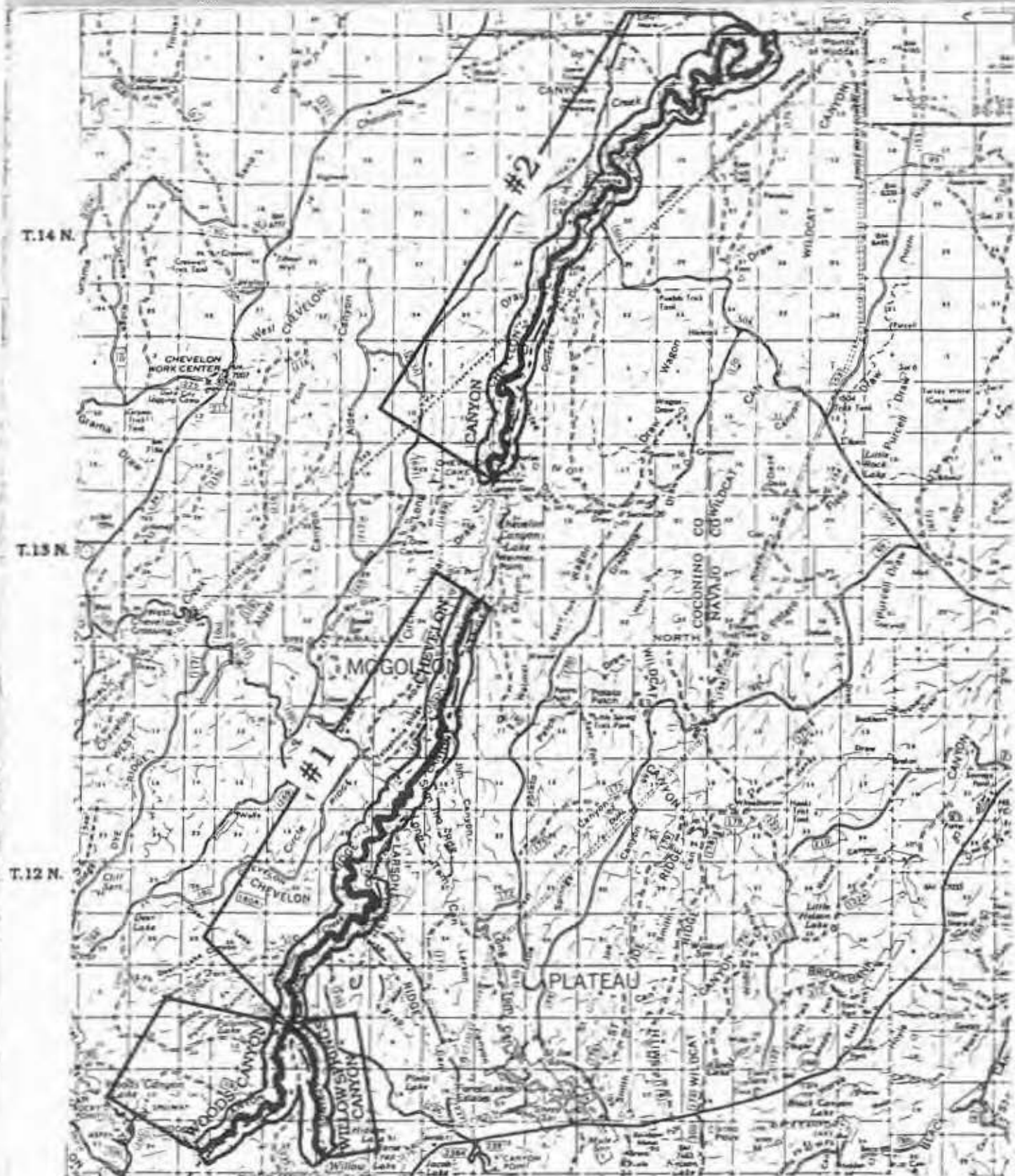
SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Fredonia and Colorado City, Arizona, and Kanab, Hildale, Johnson Canyon, Mt. Carmel and Orderville, Utah. Other users include individuals and groups from across the country. The Kanab Creek area is not well known out of the region. However, due to its proximity to the crowded Grand Canyon backcountry, it is anticipated that use will increase dramatically in the near future. Current use levels are low.



CHEVELON, WILLOW SPRINGS
AND
WOODS CANYONS

CHEVELON, WILLOW SPRINGS, AND WOODS CANYONS



CHEVELON CANYON
WILLOW SPRINGS CANYON
WOODS CANYON

CHEVELON CANYON

LOCATION

(T 11, 12, 13, 14 N, R 14, 15 E) on the Mogollon Rim, Coconino County, Chevelon Ranger District, Apache-Sitgreaves National Forest

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Eligible Segments:

Segment 1

- Confluence of Willow Springs and Woods Canyons to the south end of Chevelon Lake,
- 10.0 miles

Eligibility - Freeflowing and without impoundments or diversions

Outstandingly remarkable values - Scenic, Fish, Wildlife, Riparian, Ecological

Classification - Wild

Segment 2

- Chevelon Lake Dam North to Forest Boundary
- 16.0 miles

Eligibility - Freeflowing and without impoundments or diversions

Outstandingly remarkable values - Scenic, Geologic, Fish, Riparian

DESCRIPTION OF RESOURCES AND VALUES

Geology - The geology of Chevelon Canyon is composed of Coconino Sandstone with a Kaibab Limestone cap. Both strata are exposed.

Streamflow and Water Quality - Streamflow is ephemeral with the largest flows in early spring. Large pools are found in the late summer and fall.

Vegetation - Threatened, Endangered, and Sensitive (T&E) species: Arizona bugbane (*Cimicifuga arizonica*), Blumer's clock (*Bumex orthoneurus*), Mogollon fleabane (*Erigoron anchona*). The first two species have not been documented in Chevelon Canyon. Mogollon fleabane has been reported, but not confirmed. Information for T&E species is derived from the Terrestrial Ecosystem Survey (TES) of the Apache-Sitgreaves National Forest. The dominant landscape in this segment is TES map unit 100 (River wash) along the channel and TES map unit 51 along most of the canyon walls. Dominant species in map unit 100 are *Pinus ponderosa* and *Populus angustifolia* with numerous other woody and herbaceous species occurring in this community. Map unit 51 is dominated by *Juniperus monosperma* and *Pinus edulis*. Many other shrubs, forbs and grasses are typical of the community. Mixed conifer stands occur on north facing mesic pockets along the length of the canyon. North of Chevelon Lake dam (segment 2), vegetation communities are typically more xeric.

Fisheries and Wildlife - Threatened, Endangered, and Sensitive (T&E) species: Occult bat (*Myotis licifugus occultus*), Peregrine falcon (*Falco peregrinus*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), Mexican spotted owl (*Strix occidentalis lucida*), common Black-hawk (*Buteogallus anthracinus*), Belted king fisher (*Ceryle alcyon*), Leopard frog (*Rana* spp.), Little Colorado spinedace (*Lepidoma vittata*), and California floater (*Anodonta californiensis*).

The varied topographic, edaphic, and vegetative conditions within the canyon, combined with permanent water (pools) in the channel through most of the canyon provide habitat for numerous wildlife species. Some more common wildlife are elk, mule deer, cou deer (north of the dam mainly), black bear, mountain lion, coyote, javelina (north of the dam), wood rats, chipmunks, golden eagle, great horned owl, other raptors, common raven, passerine birds, various reptiles and amphibians. Chevelon Creek is home to brown trout and perhaps native minnows and suckers.

Visual Resources - This canyon maintains the simplistic beauty of its orange, white, and grey sandstone and limestone components. A lush under growth and a canopy of towering trees characterize the beauty of segment 1. The deep "V" canyon is more apparent in segment 2, as are the sandstone formations and evidence of the Mogollon culture.

Cultural and Historical Resources - Isolated hunter camps and rock art from the Mogollon Culture are found in the higher elevations of the canyon above the lake. As elevation decreases to the north, remnants of daily life of the Mogollons become more abundant. Most apparent among the artifacts are dwellings, rock art, and pot shards.

Air Quality - No data available.

LAND USES AND DEVELOPMENTS

Land Ownership - All National Forest.

Water Rights and Water Resource Development - Segment 1 is freeflowing with no impoundments or diversions into Chevelon Lake. Segment 2 is freeflowing with no impoundments to the Forest Boundary where it flows into the Little Colorado River. A water diversion of little or no significance is located at Durfee Crossing in Segment 2 to provide water to stock tanks in Chevelon Canyon Allotment.

Transportation Facilities - Several trails access Chevelon Creek from the east and west sides. This canyon is managed for non-motorized activities with the exception of Chevelon Crossing where a road crosses through segment 2.

Recreation Activities - Hiking, fishing, hunting, and sightseeing.

Current Special Management Designations - Chevelon Canyon is managed as a non-motorized area.

Mining - None.

Special Land Uses - Arizona Public Service - 345KV powerline crossing corridor. Future expansions proposed.

Livestock Grazing and Agriculture - Both segments 1 and 2 are part of the Chevelon Canyon Allotment, however, cattle are fenced out at the top of the canyon and no grazing occurs in the nominated segments.

Timber Harvest - T 13 N, R 14 E, S 1, 13, and 35 were cable logged in the mid 1980's by a company which held the timber rights.

SOCIAL AND ECONOMIC VALUES

The remoteness of this creek is very valuable to people looking for a break from the congestion of crowded recreation areas. It offers psychological and climatic relief as well as year round recreation in the lower elevations.

WILLOW SPRINGS CANYON

LOCATION

(T 11 N, R 14 E) on the Mogollon Rim, Coconino County, Heber Ranger District, Apache-Sitgreaves National Forest

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Behind Willow Springs Lake Dam to confluence with Chevelon Canyon

Total miles - 3.2

Eligibility - Freeflowing and without impoundments or diversions

Outstandingly remarkable values - Scenic

Classification - Wild

DESCRIPTION OF RESOURCES AND VALUES

Geology - The geology of Willow Springs Canyon is composed of Coconino Sandstone with a Kaibab Limestone cap. Both strata are exposed. Once an ocean floor, the area that is now the Mogollon Rim has gone through many changes. A fault in this area caused tremendous uplifting, raising the ground to an average elevation of 7,500 feet.

Streamflow and Water Quality - Streamflow is ephemeral with the largest flows in early spring. Water Quality - Recent surveys indicate very low levels of turbidity.

Vegetation - Threatened, Endangered, and Sensitive (T&E) species: Arizona bugbane (*Cimicifuga arizonica*), Blumer's clock (*Bumex orthoneurus*), Mogollon fleabane (*Erigeron anchona*). None of these species have been documented in the Willow Springs Canyon segment. Information for T&E species is derived from the Terrestrial Ecosystem Survey (TES) of the Apache-Sitgreaves National Forest. The dominant landscape in this segment is TES map unit 100 - River wash, dominant species are: *Pinus ponderosa* and *Populus angustifolia*. Numerous other woody and herbaceous plant species occur in this community.

Fisheries and Wildlife - Threatened, Endangered, and Sensitive (T&E) species: Northern goshawk (*Accipiter gentilis*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), Little Brown Occult bat (*Myotis lucifugus occultus*), and possibly leopard frog (*Rana* spp.). Numerous other wildlife species live in or use this segment for at least part of their life cycle, including: elk, mule deer, black bear, mountain lion, coyote, golden eagle, great horned owl, and passerine birds.

Visual Resources - This canyon maintains the simplistic beauty of its orange, white, and grey sandstone and limestone components. A lush under growth and a canopy of towering trees characterize the beauty of this area.

Cultural and Historical Resources - Isolated hunter camps and rock art from the Mogollon Culture are found in Willow Springs Canyon. However, the high elevation was not suitable for permanent living so these occurrences are rare.

Air Quality - No data available.

LAND USES AND DEVELOPMENTS

Land Ownership - All National Forest.

Water Rights and Water Resource Development - Water flows without impoundments, diversions, or development into Chevelon Canyon.

Transportation Facilities - Access to this segment of the canyon is by foot travel only; no official trails exist.

Recreation Activities - Hiking, hunting, sightseeing, and limited fishing.

Current Special Management Designations - This segment is within the "High Lakes Recreation Management Area" and is closed to motorized travel.

Mining - None.

Special Land Uses - None.

Livestock Grazing and Agriculture - None.

Timber Harvest - Horse logging occurred approximately 50 years ago in the upper portions of this segment.

SOCIAL AND ECONOMIC VALUES

The remoteness of this segment is very valuable to people looking for a break from the congestion of crowded recreation areas. This segment is a two hour drive from the desert metropolitan area and offers psychological relief as well as climatic relief.

WOODS CANYON

LOCATION

(T 11 N, R 14 E) on the Mogollon Rim, Coconino County, Chevelon Ranger District, Apache-Sitgreaves National Forest

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Woods Canyon 1 mile below Woods Canyon Lake Dam to confluence with Chevelon Canyon

Total miles - 4.0

Eligibility - Freeflowing and without impoundments or diversions

Outstandingly remarkable values - Scenic, wildlife, riparian, ecological

Classification - Wild

DESCRIPTION OF RESOURCES AND VALUES

Geology - The geology of Woods Canyon is composed of Coconino Sandstone with a Kaibab Limestone cap. Both strata are exposed. Once an ocean floor, the area that is now the Mogollon Rim has gone through many changes. A fault in this area caused tremendous uplifting, raising the ground to an average elevation of 7,500 feet.

Streamflow and Water Quality - Streamflow is ephemeral with the largest flows in early spring. Water Quality - Recent surveys indicate very low levels of turbidity.

Vegetation - Threatened, Endangered, and Sensitive (T&E) species: Arizona bugbane (*Cimicifuga arizonica*), Blumer's clock (*Bumex orthoneurus*), Mogollon fleabane (*Erigeron anchona*). None of these species have been documented in the Woods Canyon segment. Information for T&E species is derived from the Terrestrial Ecosystem Survey (TES) of the Apache-Sitgreaves National Forest. The dominant landscape in this segment is TES map unit 100 - River wash, dominant species are: *Pinus ponderosa* and *Populus angustifolia*. Numerous other woody and herbaceous plant species occur in this community.

Fisheries and Wildlife - Threatened, Endangered, and Sensitive (T&E) species: Northern goshawk (*Accipiter gentilis*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), and possibly leopard frog (*Rana* spp.). Numerous other wildlife species live in or use this segment for at least part of their life cycle, including: elk, mule deer, black bear, mountain lion, coyote, golden eagle, great horned owl, and passerine birds.

Visual Resources - This canyon maintains the simplistic beauty of its orange, white, and grey sandstone and limestone components. A lush under growth and a canopy of towering trees characterize the beauty of this area.

Cultural and Historical Resources - Isolated hunter camps and rock art from the Mogollon Culture are found in Woods Canyon. However, the high elevation was not suitable for permanent living so these occurrences are rare.

Air Quality - No data available.

LAND USES AND DEVELOPMENTS

Land Ownership - All National Forest

Water Rights and Water Resource Development - Water flows without impoundments, diversions, or development into Chevelon Canyon.

Transportation Facilities - Access to this segment of the canyon is by foot travel only; no official trails exist.

Recreation Activities - Hiking, hunting, sightseeing, and limited fishing.

Current Special Management Designations - This segment is within the "Rim Lakes Recreation Management Area" and is closed to motorized travel.

Mining - None.

Special Land Uses - None.

Livestock Grazing and Agriculture - Part of this segment is in the Chevelon Canyon range allotment, however, cattle are fenced out at the top of the canyon.

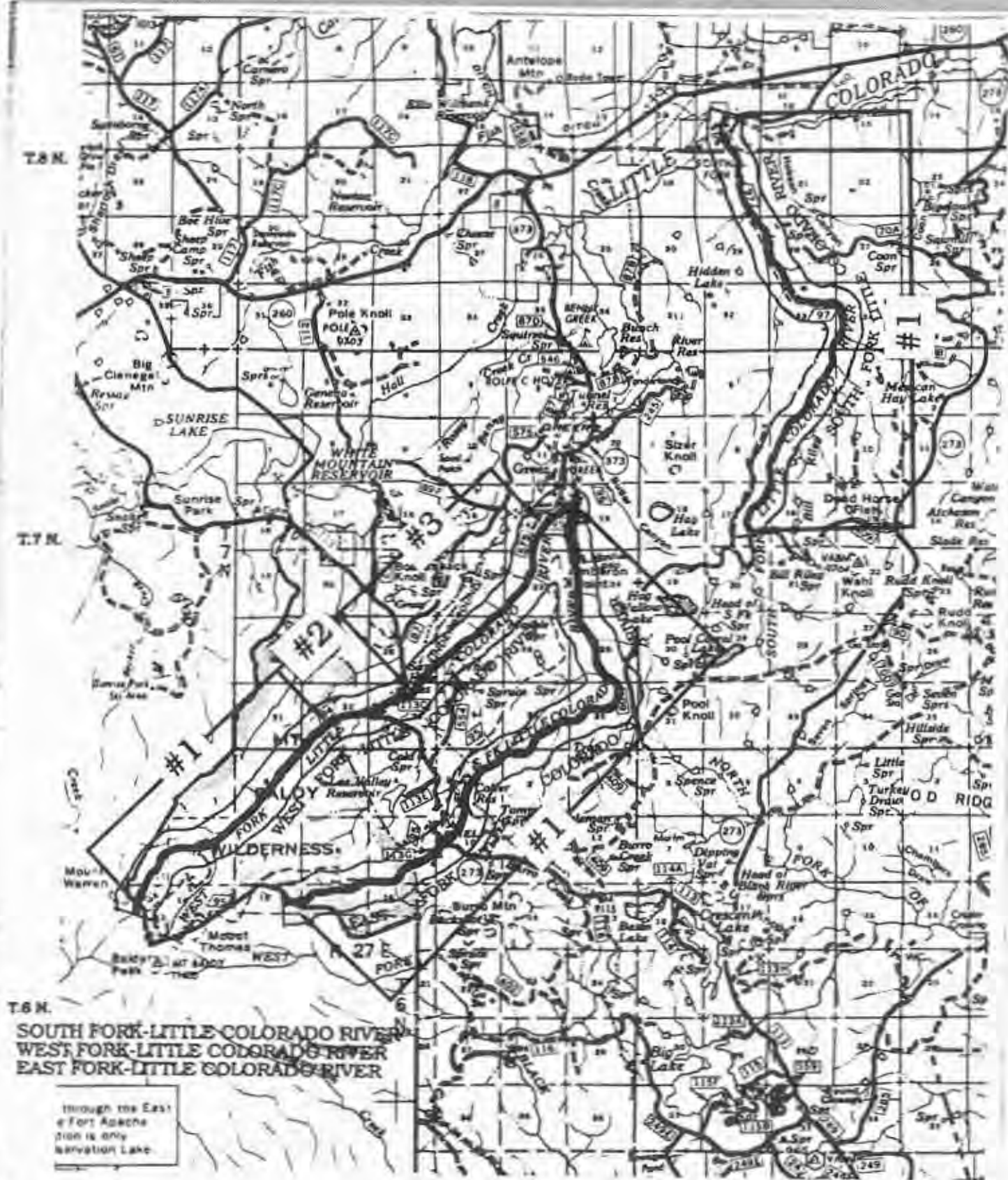
Timber Harvest - None.

SOCIAL AND ECONOMIC VALUES

The remoteness of this segment is very valuable to people looking for a break from the congestion of crowded recreation areas. This segment is a two hour drive from the desert metropolitan area and offers psychological relief as well as climatic relief.

WEST FORK - LITTLE COLORADO RIVER

WEST FORK LITTLE COLORADO RIVER



R.27 E.

R.28 E.



WEST FORK-LITTLE COLORADO RIVER

LOCATION

The West Fork-Little Colorado River is in Apache County, Arizona; Apache-Sitgreaves National Forests.

The West Fork-Little Colorado River originates in the Mount Baldy Wilderness and flows northeast for 10.0 miles to Greer where it joins the East Fork of the Little Colorado River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 10.0 miles of the West Fork-Little Colorado River, from the headwaters to Greer, were evaluated for potential designation as a Wild and Scenic River.

A. Eligible Segments:

Segment 1

5 Miles

From headwater (T6N, R26E, Section 14) to Wilderness Boundary (T7N, R27E, Section 32)

Segment 2

1.5 Miles

From Wilderness Boundary (T7N, R27E, Section 32) to Powerline Crossing (T7N, R27E, Section 33)

Segment 3

3.5 Miles

From Powerline Crossing (T7N, R27E, Section 33) to Greer (T7N, R27E, Section 14)

B. Eligibility:

Segments 1, 2, and 3 are free flowing and without impoundment or diversions.

The outstandingly remarkable values include, but are not limited to: wilderness, scenic, recreational, wildlife.

Segment 1 - Wilderness, Scenic and Recreational

The headwaters of the river are high in the Mount Baldy Wilderness. The river flows down to Sheeps Crossing on State Route 273 which is a heavily used day use recreation area. The river flows year-round and has "Unique Waters" status according to the Arizona Department of Environmental Quality.

Segment 2 - Scenic and Recreational

This segment flows from the wilderness boundary near Sheeps Crossing northeast to the powerline crossing. It is heavily used by fishermen and hikers due to the close proximity of State Route 273. It has "Unique Waters" status according to the Arizona Department of Environmental Quality.

Segment 3 - Scenic, Recreational and Wildlife

This segment flows from the powerline crossing northeast into Greer, Arizona. It is somewhat inaccessible except around the Greer area. It is heavily used by fishermen and hikers. A Mexican spotted owl has been located within this segment. This area has "Unique Waters" status according to the Arizona Department of Environmental Quality.

C. Classification:

Segment 1 - Wild

Segment 2 - Recreational

Segment 3 - Wild

The total river corridor (10 miles) is administered by the U. S. Forest Service.

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Volcanism has controlled the development of the present day landscape in the areas of the proposed wild and scenic river. Mt. Baldy rises above the surrounding lava plateau about 2200 feet. It is composed mainly of latite. Two distinct lava flows occurred approximately 10 and 8.6 million years ago, separated by the Sheeps Crossing Formation. The Sheeps Crossing Formation consists of patches of sediments found commonly near the mouths of the larger valleys. The deposit has been eroded and may only exist in areas protected by overlying basalt. It was formed from volcanic debris and pieces of solidified lava set in motion by either explosions or precipitation. The debris traveled down drainages quickly, picked up large boulders and formed large colluvial fans. Two distinct members are found in this formation. The lower member of the formation appears as breccia, sandstone, gravel, airfall tephra, and abundant unsorted fragmental units deposited by mudflows. The upper member is characterized by the crudely stratified, poorly sorted sand and gravel, as seen near the old railroad grade near Thompson Ranch along Burro Creek. (Merrill, 1984).

Surrounding Mt. Baldy, large areas of basalt flow away from the the lava cone. Basalt of this age overlies the early volcanic rocks and the Mt. Baldy volcanic rocks. Younger basaltic rocks occur as cinders, agglomerate, intrusive and extrusive rocks. The maximum thickness of basalt exposed in the valley of the Little Colorado River north of Greer is greater than 150 meters. Local accumulations of cinders in some of the more than 170 cinder cones may exceed 200 meters in height (Merrill 1984).

At least 4 times in the last 200,000 years, glaciers have formed in the upper valleys of the Little Colorado and Black rivers. These have produced cirques, side-glacial channels, U-shaped valleys, and have left well-formed moraines and scattered gravel deposits to mark their former positions (Pewe, 1984). These can be recognized above Sheeps Crossing and Lee Valley Reservoir along the East and West Forks of the Little Colorado River and along the upper Black River drainage.

B. Streamflow and Water Quality:

Streamflow is year-round but will increase during spring run-off and summer rains. No data is available to estimate median or duration of flows. All segments have "Unique Waters" status according to the Arizona Department of Environmental Quality

C. Vegetation:

The following TES species are known to occur within one-half mile of the proposed river segment:

Allium goodingii (Gooding onion)
Salix arizonica (Arizona Willow)

The landscape surrounding segments 1 and 2 is dominated by spruce, corkbark fir, Douglas-fir, white fir and some ponderosa pine. The channel consists of spruce, Douglas-fir and willow. Grasses, forbs and abundant wild flowers can be found.

The landscape surrounding segment 3 is similar to segment 1 and 2 but ponderosa pine increases as the river flows towards Greer.

D. Fish and Wildlife:

The following TES species are known to occur within one-half mile of the proposed river segment:

TES Species:

Pinicola enucleator (pine grosbeak)
Sorex pelustris (water shrew)

Many other species can be found within the area.

E. Visual Resources:

This river is one of the most scenic areas in eastern Arizona. Mount Baldy, to the south at 11,043 feet, contains the headwaters of the river. Snow can be found to mid-July or early August, depending on the amount received in the winter. The fall aspen colors are a favorite for many people throughout the state. Shrubs, stream-side vegetation and animals are abundant on many of the hiking trails.

F. Cultural and Historical Resources:

Little Cultural Resource Inventory has been conducted along the West Fork of the Little Colorado River corridor. Although evidence of prehistoric occupation is known on Mt Baldy Peak near the headwaters and in the general area of segments 2 and 3, no sites have been recorded along the river corridor itself. Historic resources may include remnants of early homesteading activities especially in the Greer area. The abandoned bed of the former Apache Railroad traverses the corridor area.

G. Air Quality:

Air quality monitoring is taking place within the Wilderness at this time. No data is available. Mt Baldy Wilderness is a Class I Airshed.

LAND USES AND DEVELOPMENTS

A. Land Ownership: The river is located in the Apache-Sitgreaves National Forests on the Springerville Ranger District. The entire 10 miles is all on National Forest lands.

B. Water Rights and Water Resource Developments: There are no known diversions within the three segments. The water from this area is used by the towns of Eagar/Springerville and St. Johns for irrigation many miles below these segments.

C. Transportation Facilities:

Segment 1 - Non-mechanized access only due to Wilderness Classification. The Baldy Trail and Phelps Cabin trail are found within this segment

Segment 2 - Vehicle access is by State Route 273 to Sheeps Crossing. Some old logging roads can be found, but they will stop 1/2 to 1/4 mile from the stream.

Segment 3 - Vehicle access is only found in the Greer area. Several trails start at Government Springs parking lot and run south along the drainage.

D. Recreation Activities: All segments - The majority of the activities in this area are associated with hiking and fishing. The Baldy trailhead is heavily used as the main access into the Wilderness. Day use is common along all segments.

E. Special Management Designations:

Segment 1 - Wilderness, "Unique waters"

Segment 2 - "Unique waters"

Segment 3 - "Unique waters"

F. Special Land Uses:

Segment 1 - None

Segment 2 - State Route 273 (State Highway) T7N, R27E, Sec. 32

Segment 3 - Navopache Powerline T7N, R27E, Sec. 33

G. Livestock Grazing: This segment is open to livestock grazing.

H. Timber Harvest: None of the corridor is identified for timber harvest.

SOCIAL AND ECONOMIC VALUES

The users of this area are from Show Low, Pinetop-Lakeside, Eagar, Springerville, St. Johns, Alpine and other local communities. Many people come from Flagstaff, Phoenix, and Tucson. The area is known for its wildlife, fishing, hiking and scenery.

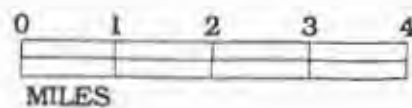
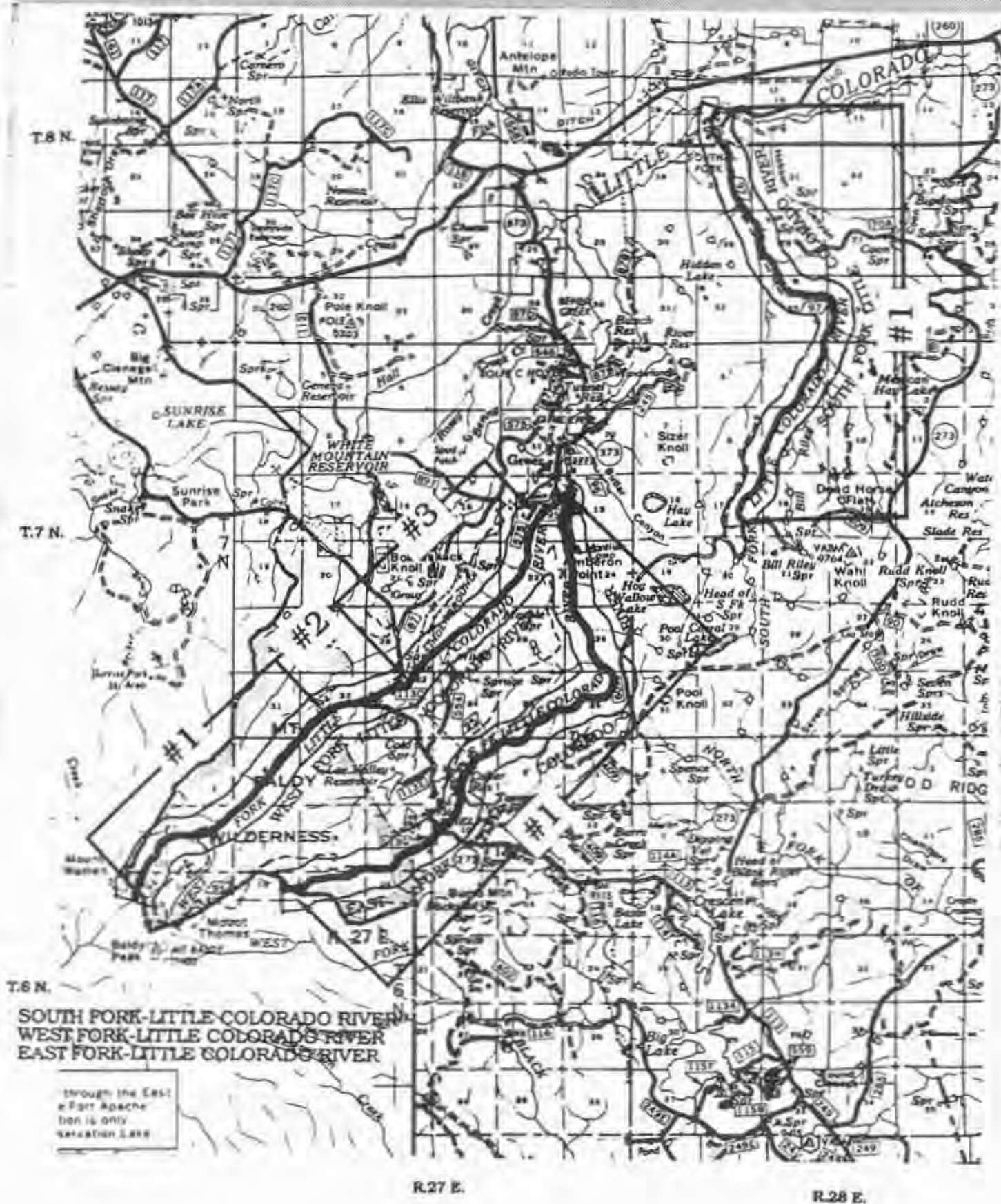
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EAST FORK - LITTLE COLORADO RIVER

EAST FORK LITTLE COLORADO RIVER



EAST FORK-LITTLE COLORADO RIVER

LOCATION

East Fork-Little Colorado River, Apache County, Apache-Sitgreaves National Forests.

This river originates in the Mount Baldy Wilderness and flows northeast into the West Fork-Little Colorado River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 11.5 miles from the headwaters (T6N, R27E, Sec. 18) to the West Fork-Little Colorado River, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments: 11.5 miles

From headwaters to the West Fork-Little Colorado River.

Eligibility:

Segment 1 is free flowing and without impoundments or diversions.

Outstandingly remarkable values include: Scenic, recreational, fish, wildlife, riparian and ecological.

The headwaters of this river start in the Mount Baldy Wilderness and flow north east thru the Phelps Research Natural Area. This area is known for its scenery and clean water. The year-round water is important to the riparian area and to wildlife. This area supports a large diversity of flora and fauna associated with the unique forest of eastern Arizona. House sized boulders can be found along this river.

Classification

Segment 1: Scenic.

The total river corridor (1/4 mile on each side) includes approximately 3680 acres, of which the Forest administers 100%.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Volcanism has controlled the development of the present day landscape in the areas of the proposed wild and scenic river. Mt. Baldy rises above the surrounding lava plateau about 2200 feet. It is composed mainly of latite. Two distinct lava flows occurred approximately 10 and 8.6 million years ago separated by the Sheeps Crossing Formation. The Sheeps Crossing Formation consists of patches of sediments found commonly near the mouths of the larger valleys. The deposit has been eroded and may only exist in areas protected by overlying basalt. It was formed from volcanic debris and pieces of solidified lava set in motion by either explosions or precipitation. The debris traveled down drainages quickly, picked up large boulders and formed large colluvial fans. Two distinct members are found in this formation. The lower member of the formation appears as breccia, sandstone, gravel, airfall tephra, and abundant unsorted fragmental units deposited by mudflows. The upper member is characterized by the crudely stratified, poorly sorted sand and gravel, as seen near the old railroad grade near Thompson Ranch along Burro Creek (Merrill, 1984).

Surrounding Mt. Baldy, large areas of basalt flow away from the the lava cone. Basalt of this age overlies the early volcanic rocks and the Mt. Baldy volcanic rocks. Younger basaltic rocks occur as cinders, agglomerate, intrusive and extrusive rocks. The maximum thickness of basalt exposed in the valley of the Little Colorado River north of Greer is greater than 150 meters. Local accumulations of cinders in some of the more than 170 cinder cones may exceed 200 meters in height (Merrill 1984).

At least 4 times in the last 200,000 years, glaciers have formed in the upper valleys of the Little Colorado and Black rivers. These have produced cirques, side-glacial channels, U-shaped valleys, and have left well-formed moraines and scattered gravel deposits to mark their former positions (Pewe, 1984). These can be recognized above Sheeps Crossing and Lee Valley Reservoir along the East and West Forks of the Little Colorado River and along the upper Black River drainage.

Streamflow and Water Quality

Streamflow - The flow of this river is year-round, but during dry years it will be reduced to a minimum. Heavy spring run-off can occur with the melting snow pack. No data is available to estimate median or duration flows.

Water quality - No data is available.

Vegetation

TES Species: Allium goodingii (Gooding onion)
Castilleja mogollonica (White Mountain Paint Brush)
Salix arizonica (Arizona willow)

The landscape in and around the area has many different plant communities:

1. Pine Brush Grass 34%
2. Douglas fir, White fir 9%
3. Mixed Grass <1%
4. Mixed Meadow 2%
5. Ponderosa pine 18%
6. Spruce 34%
7. Sub-Alpine 3%

The year-round flow provides the opportunity for good riparian values.

Fisheries & Wildlife

TES Species: Empidonax traillii extimus (Southwest willow flycatcher)
Microtus montanus arizonensis (Arizona montane vole)
Sorex palustris (Water shrew)
Zapus hudsonius luteus (New Mexican jumping mouse)

Visual Resources - The area is very typical of the high elevation areas in eastern Arizona. Large boulders can be found in some areas adding to the natural beauty of the river.

Cultural and Historical Resources - There are no surveys.

Air Quality - There is no data in this area.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in Apache-Sitgreaves National Forest on the Springerville Ranger District. All of the segment is on National Forest lands.

Water Rights and Water Resource Developments - There are no known diversions located within the segment. The water from the area is used by the towns of Eagar, Springerville and St. Johns for irrigation.

Facilities - About 25% of the segment is located within the Mt. Baldy Wilderness and is non-mechanized. Some of the area can be accessed from State Route 276. There are several primitive roads from past logging activities that access this area. The north end of the segment can be accessed from Greer and the Government Springs area.

Recreation Activities - The activities within this segment are fishing, hiking, day use and some horseback use.

Current Special Management Designations

25% of segment Wilderness
10% Phelps Research Natural Area

Special Land Uses

Phelps Research Natural Area
State Route 273
Navopache Powerline
Coulter Reservoir (not used)

Livestock Grazing - This river is open to livestock grazing.

Timber Harvest - None of the corridor is identified for timber harvest.

SOCIAL AND ECONOMIC VALUES

The users of this area are from Show Low, Pinetop - Lakeside, Eagar, Springerville, St. Johns, Alpine, and other local communities. We also have people come from Flagstaff, Phoenix, and Tucson. The area is known for its wildlife, fishing, hiking, and scenery.

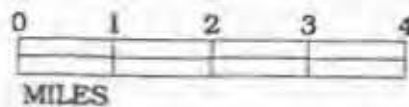
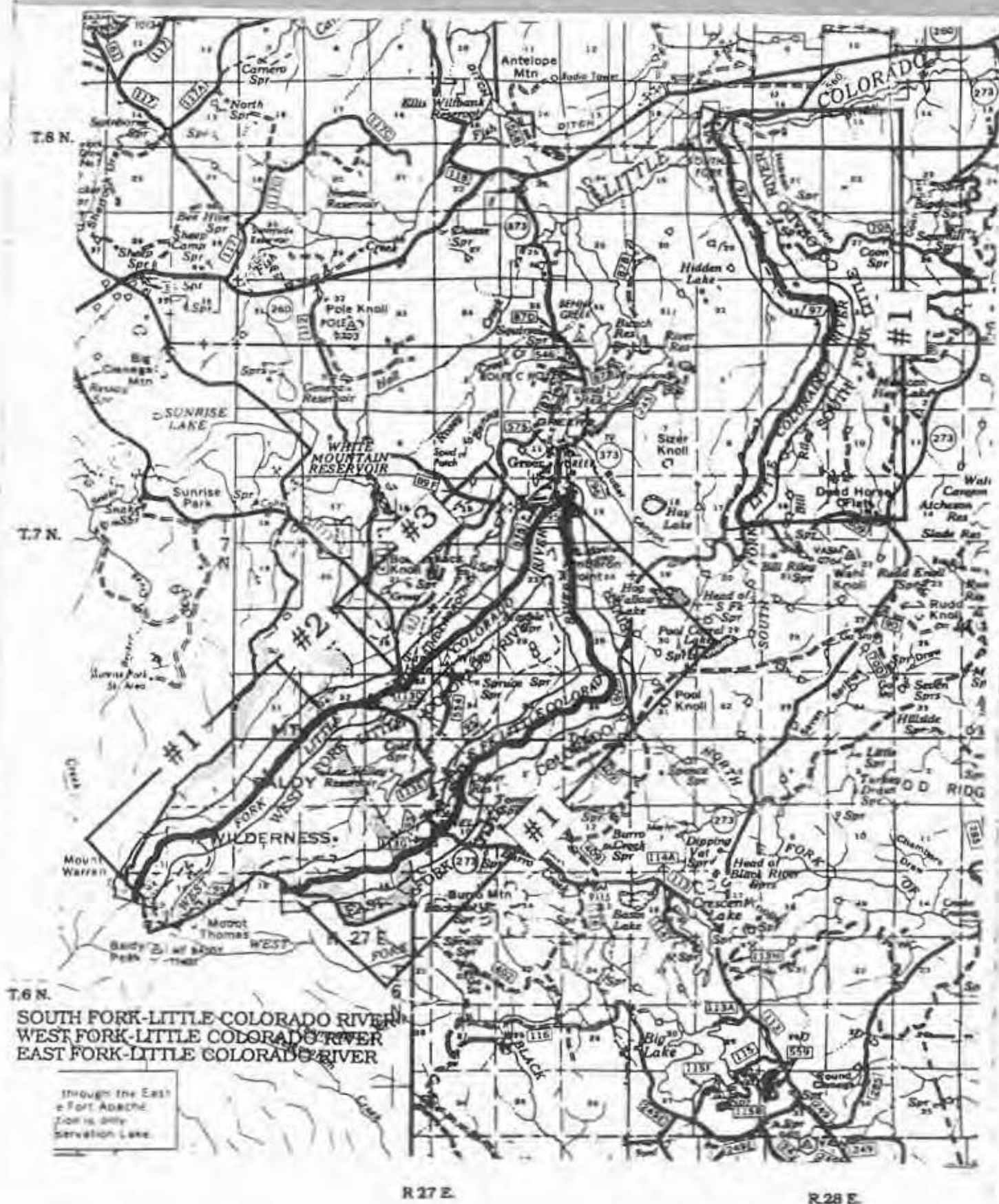
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SOUTH FORK - LITTLE COLORADO RIVER

SOUTH FORK LITTLE COLORADO RIVER



SOUTH FORK-LITTLE COLORADO RIVER

LOCATION

This segment of the South Fork-Little Colorado River is on the Apache-Sitgreaves National Forests, Springerville Ranger District, Apache County, Arizona.

This segment starts just south of Forest Road (FR) 409 at T7N; R28E; Sec.17 and terminates at the Little Colorado River T8N; 28E; Sec 17.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 9.5 miles of the South Fork-Little Colorado River, from FR 409 to 0.5 mile north of the forest boundary were evaluated for potential designation as a Wild and Scenic River.

A. Eligible Segments

Segment 1 is free flowing and without impoundments or diversions.

The outstandingly remarkable values include: Cultural Resources.

This portion of the South Fork-Little Colorado River flows from a broad flat area near FR 409 and quickly becomes a narrow steep canyon. It supports a large variety of flora and fauna. The area is used for fishing, hiking and some horseback use.

B. Classification: Scenic

The total river corridor (1/4 mile each side) includes approximately 2,660 acres, of which the Forest administers approximately 95%.

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Volcanism has controlled the development of the present day landscape in the areas of the proposed wild and scenic river. Mt. Baldy rises above the surrounding lava plateau about 2200 feet. It is composed mainly of latite. Two distinct lava flows occurred approximately 10 and 8.6 million years ago, separated by the Sheeps Crossing Formation. The Sheeps Crossing Formation consists of patches of sediments found commonly near the mouths of the larger valleys. The deposit has been eroded and may only exist in areas protected by overlaying basalt. It was formed from volcanic debris and pieces of solidified lava set in motion by either explosions or precipitation. The debris traveled down drainages quickly, picked up large boulders and formed large colluvial fans. Two distinct members are found in this formation. The lower member of the formation appears as breccia, sandstone, gravel, airfall tephra, and abundant unsorted fragmental units deposited by mudflows. The upper member is characterized by the crudely stratified, poorly sorted sand and gravel, as seen near the old railroad grade near Thompson Ranch along Burro Creek. (Merrill, 1984).

Surrounding Mt. Baldy, large areas of basalt flow away from the the lava cone. Basalt of this age overlies the early volcanic rocks and the Mt. Baldy volcanic rocks. Younger basaltic rocks occur as cinders, agglomerate, intrusive and extrusive rocks. The maximum thickness of basalt exposed in the valley of the Little Colorado River north of Greer is greater than 150 meters. Local accumulations of cinders in some of the more than 170 cinder cones may exceed 200 meters in height (Merrill 1984).

At least 4 times in the last 200,000 years, glaciers have formed in the upper valleys of the Little Colorado and Black rivers. These have produced cirques, side-glacial channels, U-shaped valleys, and have left well-formed moraines and scattered gravel deposits to mark their former positions (Pewe, 1984). These can be recognized above Sheeps Crossing and Lee Valley Reservoir along the East and West Forks of the Little Colorado River and along the upper Black River drainage.

B. Streamflow and Water Quality:

Streamflow: Is year-round but becomes very minimal during the summer. There is no data available to estimate median or duration of flows.

Water Quality: No Data is available.

C. Vegetation:

TES Species: Allium goodingii (Gooding onion)

The landscape surrounding this area is dominated by ponderosa pine with mixed conifer (Douglas-fir, white fir, and spruce) and Pinon/Juniper in the lower elevations. The riparian area has alder, willow and cottonwood throughout.

D. Fish and Wildlife:

TES Species:

Accipiter gentilis (Northern Goshawk)
Catharus fuscescens (Veery)
Dumetella carolinensis (Gray Catbird)
Empidonax traillii extimus (S.W. Willow Flycatcher)
Setophaga ruticilla (American Redstart)

The great variety of habitat types provides for diversity and abundance of wildlife species.

E. Visual Resources:

The diversity of textures, colors, and forms represented in the canyon's, trees, shrubs, streamside vegetation, and animals, create a unique area for hiking and fishing along the trails.

F. Cultural and Historical Resources:

The Cultural values within the river corridor include occasional prehistoric sites, sherd and lithic scatters, field houses, small room blocks, possible rock shelters and rock art panels. Sites are associated with the Mogollon Culture.

G. Air Quality:

No Data Available

LAND USES AND DEVELOPMENTS

A. Land Ownership: The river is located on the Apache-Sitgreaves National Forests, Springerville Ranger District, Apache County, Arizona. There is about 0.5 mile located on private land on the north end of the segment.

B. Water Rights and Water Resource Developments: The river is free of diversions and impoundments. Most of the water is used by Eagar/Springerville and St. Johns for irrigation with the Water rights being held by Round Valley and Lyman Lake water users.

C. Transportation Facilities: Vehicle access is from FR 409, various small logging roads, and through the South Fork Campground located on the north end of the segment. A Forest Service trail runs along the river and terminates near Mexican Hay Lake.

D. Recreation Activities: There are a variety of recreation activities that occur along portions of the river. The South Fork Campground is along the north end of the segment. The South Fork trail runs south towards Mexican Hay Lake. Fishing, hunting and hiking are the major uses of the area.

E. Special Management Designations: None with this area.

F. Mining: There are no known oil or gas leases, no developed geothermal sites, no active mining operations or quarries in this segment.

G. Special Land Uses: None within this area.

H. Livestock Grazing and Agriculture: This segment is open to livestock grazing.

I. Timber Harvest: The south 1/2 of the segment was harvested under the South Fork Timber Sale in 1983. No future harvest activities have been identified at this time. Most of the area is suitable for harvest.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of Eagar/Springerville, Alpine, St. Johns, Show Low, Pinetop-Lakeside, and other small towns. Some use is from Flagstaff, Phoenix, and Tucson.

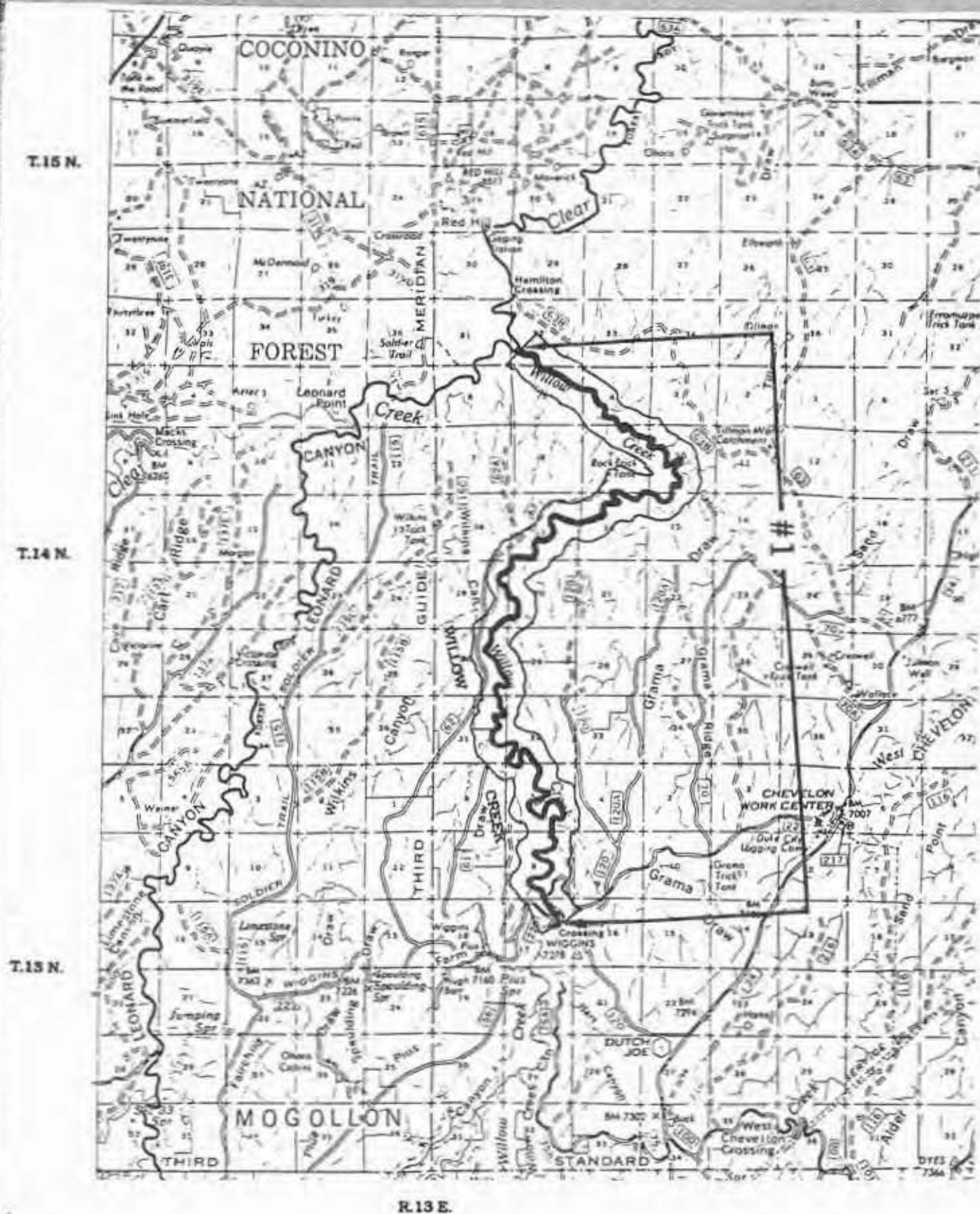
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WILLOW CREEK

WILLOW CREEK



WILLOW CREEK

LOCATION

T 13 and 14 N. R 13 E. on the Mogollon Rim. Coconino County, Chevelon Ranger District, Apache-Sitgreaves National Forest

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Segment Found Potentially Eligible for Designation:

From 1/4 mile north of Wiggins Crossing to the confluence with Clear Creek

Total miles - 14.0

Eligibility - Freeflowing and without impoundments or diversions

Outstandingly remarkable values - Scenic, geologic, wildlife, riparian, ecological

Classification - Wild

DESCRIPTION OF RESOURCES AND VALUES

Geology - The geology of Willow Canyon is composed of Coconino Sandstone with a Kaibab Limestone cap. Both strata are exposed.

Streamflow and Water Quality - Streamflow is ephemeral with the largest flows in early spring. Water Quality - Recent surveys indicate very low levels of turbidity.

Vegetation - The dominant landscape in this segment is TES map unit 100 (River wash) along the channel and TES map unit 51 along most of the canyon walls. Dominant species in map unit 100 are *Pinus ponderosa* and *Populus angustifolia* with numerous other woody and herbaceous species occurring in this community. Map unit 51 is dominated by *Juniperus monosperma* and *Pinus edulis*. Many other shrubs, forbs and grasses are typical of the community. Mixed conifer stands occur on north facing mesic pockets along the length of the canyon.

Fisheries and Wildlife - Threatened, Endangered, and Sensitive (T&E) species: Occult bat (*Myotis licifugus occultus*), Peregrine falcon (*Falco peregrinus*), Bald eagle (*Haliaeetus leucocephalus*), Osprey (*Pandion haliaetus*), Mexican spotted owl (*Strix occidentalis lucida*), common Black-hawk (*Buteogallus anthracinus*), Belted king fisher (*Ceryle alcyon*), Leopard frog (*Rana* spp.), Little Colorado spinedace (*Lepidoma vittata*), and California floater (*Anodonta californiensis*).

The varied topographic, edaphic, and vegetative conditions within the canyon, combined with permanent water (pools) in the channel through most of the canyon, provide habitat for numerous wildlife species. Some more common wildlife are elk, mule deer, cou deer (north of the dam mainly), black bear, mountain lion, coyote, javelina (north of the dam), wood rats, chipmunks, golden eagle, great horned owl, other raptors, common raven, passerine birds, various reptiles and amphibians. Chevelon Creek is home to brown trout and perhaps native minnows and suckers.

Visual Resources - This canyon maintains the simplistic beauty of its orange, white, and grey sandstone and limestone components. A lush under growth and a canopy of towering trees characterize the beauty of this area.

Cultural and Historical Resources - Rock art and dwellings from the Mogollon Culture, and pot shards from the Apache Culture are found in this canyon.

Air Quality - No data available.

LAND USES AND DEVELOPMENTS

Land Ownership - 13.25 miles National Forest, 0.75 miles private inholding.

Water Rights and Water Resource Development - Water flows without impoundments, diversions, or development into Clear Creek.

Transportation Facilities - Access to this segment of the canyon is by foot travel only; no official trails exist.

Recreation Activities - Hiking, hunting, sightseeing, and limited fishing.

Current Special Management Designations - None.

Mining - None.

Special Land Uses - None.

Livestock Grazing and Agriculture - None.

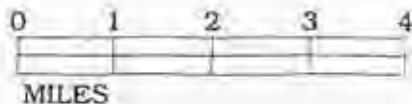
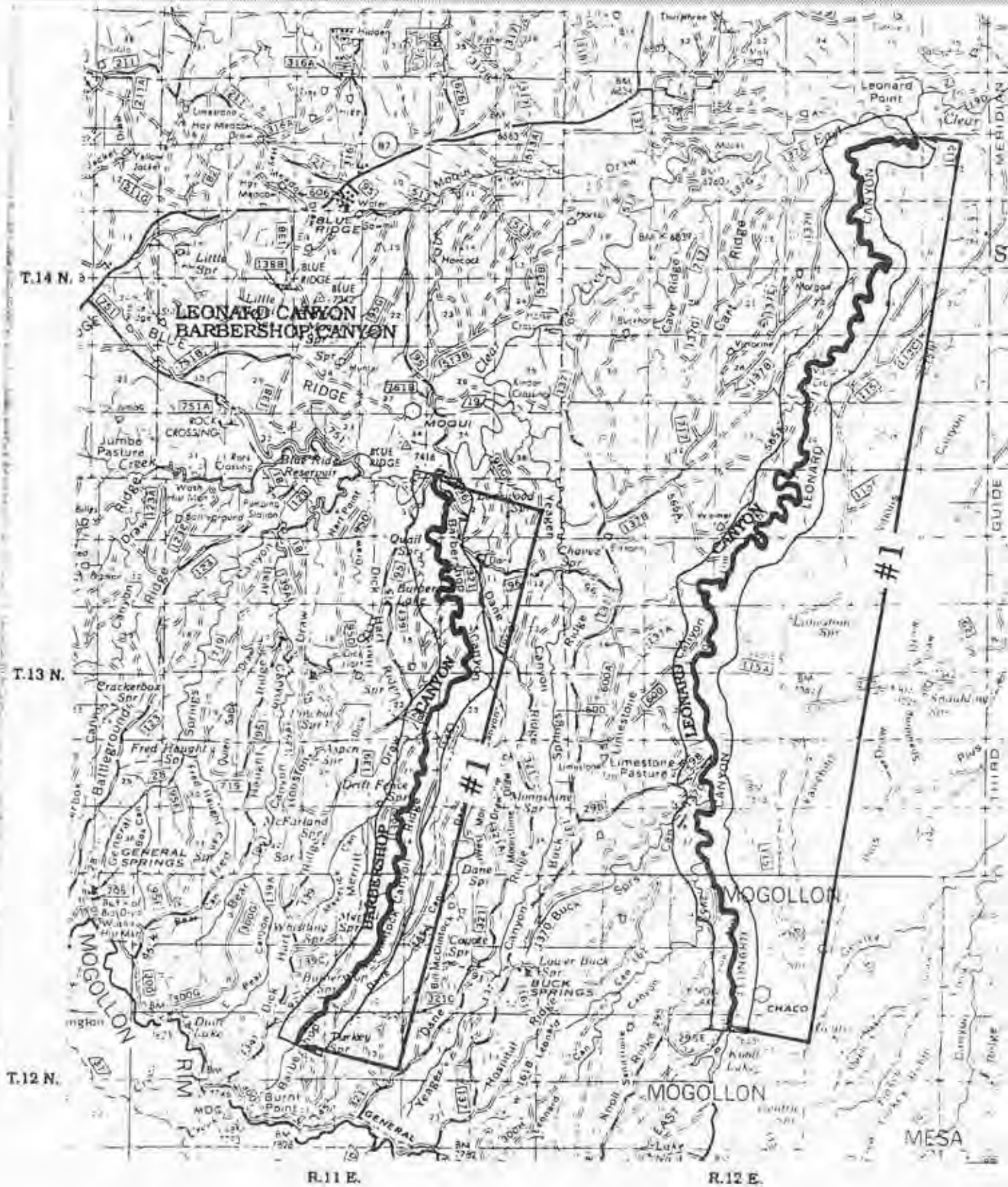
Timber Harvest - T 13 N, R 13 E, S 5 and T 13 N R 14 E S 19, 29, and 31 were cable logged in the mid 1980's by a company which held the timber rights.

SOCIAL AND ECONOMIC VALUES

The remoteness of this segment is very valuable to people looking for a break from the congestion of crowded recreation areas. This segment is a two hour drive from the desert metropolitan area and offers psychological relief as well as climatic relief.

BARBERSHOP CANYON

BARBERSHOP CANYON



BARBERSHOP CANYON

LOCATION

Barbershop Canyon is located on the Coconino National Forest in Coconino County, Arizona. The origin is just north of the Mogollon Rim from where the stream flows northward approximately 14 miles to its confluence with East Clear Creek as a part of the Little Colorado River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 13 miles of Barbershop Canyon below a flow control structure located in Section 16, Township 21 North, Range 11 East were evaluated for potential Wild and Scenic River designation. Barbershop Canyon is free flowing from the control structures located within one mile of its headwaters to its confluence with East Clear Creek, the evaluated portion. Two outstandingly remarkable values were determined to exist in this segment.

1. **Fisheries Habitat Values** - Barbershop Canyon at one time contained populations of Little Colorado Spindace, Lepidomeda vittata. This segment can provide habitat for this species which has been designated threatened under both state and federal species classification.

2. **Scenic Values** - Barbershop Canyon like East Clear Creek into which it flows is noted for its scenic beauty. It has formed an extremely narrow canyon with rocky cliffs and a variety of colors and textures due to the variation of vegetative species and geologic formations.

This segment has been determined to be preliminarily eligible and classified as Wild. About 3500 acres are contained within the river corridor, all of them on the Coconino National Forest.

DESCRIPTION OF RESOURCES AND VALUES

Geology: Barbershop Canyon in geologic terms is a youthful canyon which has cut through the Cenozoic basalt cap to the horizontal sedimentary layers which typify the Colorado Plateau Region. The process of differentiated erosion has created cliffs, scarps and bluffs all which form the canyon proper. The geologic process of erosion has also revealed the geologic past represented by the Moenkopi Sandstone Formation, Kaibab Limestone Formation, the Toroweap Formation and others all of which are also exposed in the Grand Canyon of the Colorado River.

Drainage here is dendritic, branching like a tree, and northbound toward the Little Colorado River. Barbershop Canyon has incised twisting clefts through the Kaibab Formation, clefts that may be collapsed underground solution channels in the relatively soluble limestone.

Streamflow: Barbershop Canyon is free flowing for its entire length. However, streamflow is intermittent during low water years.

Vegetation: The northern aspects of Barbershop Canyon are cool and moist, supporting a mixed conifer climax community. The upper canopy is dominated by Douglas fir, white fir, and ponderosa pine, while lesser amounts of Southwestern white pine, Rocky Mountain juniper, and Gambel oak fill out the thick canopy. Oregon grape, Gambel oak and mountain lover dominate the shrub layer while fringed sagebrush dominate the forb layer. Arizona fescue, mountain muhly, and bottlebrush squirreltail are the dominant grasses.

The southern aspect of Barbershop Canyon are warmer and dryer, supporting a ponderosa pine community. Ponderosa pine dominates the tree canopy with small amounts of Gambel oak and Rocky mountain juniper present. Gambel oak dominates the shrub layer while western yarrow inhabits the forb layer. Grasses are represented by Arizona fescue, mountain muhly, mutton grass, and bottlebrush squirreltail.

The bottom of Barbershop Canyon consists of healthy stands of canyon hardwoods. The primary vegetation found in the canyon bottom consists of thinleaf alder, willow, box-elder, narrowleaf cottonwood, New Mexico locust, and Arizona walnut.

A population of Arizona cinquefoil, Potentilla multiflorata, is located near the confluence of Barbershop Canyon and East Clear Creek. The Arizona cinquefoil is a Region 3 USFS Sensitive Species, usually associated with shallow rocky washes.

Hebb's willow, Salix hebbiana, is a plant associated with riparian areas and is a species of concern on the Coconino National Forest. No known population occur in Barbershop Canyon, however the canyon may have been a traditional range for the willow.

A record of a population of a rare fleabane, Erigeron pringlei, exists in Barbershop Canyon.

The landscape beyond Barbershop Canyon consists of a mixed conifer climax community near the canyon origin, changing to a ponderosa pine dominated community as the stream flows northward towards East Clear Creek.

Fisheries and Wildlife: Barbershop Canyon provides summer range for game species such as deer, elk, and turkey. The canyon, with its dense cover provides travel ways and reproductive habitat near dependable water sources. In addition, hunting territory for bear, mountain lion, and various raptor species is provided by the canyon. The landscape beyond the canyon consists of open canopied ridges which supply forage for deer and elk. Ridgeline margins parallel thick cover on canyon slopes which provide nesting and brood areas for turkey.

A variety of ground, tree, and cavity nesting birds utilize the canyon area, as do many small mammal species such as rabbits, skunks, porcupines, Abert squirrels, red squirrels, woodrats, and other rodents. These in turn supply food for raptors and carnivores such as fox, coyote, bobcat, and mountain lion.

There are a number of Threatened, Endangered, and Sensitive species that utilize Barbershop Canyon for forage and nesting areas. These include bald eagles, Mexican spotted owls, flammulated owls, peregrine falcons, Northern goshawks, and other raptors including Cooper's Hawks and sharp shinned hawks.

Barbershop Canyon is a fish bearing water with native fish species found in the area including speckled dace, bluehead suckers, and flannelmouthed suckers.

Exotic fish species in Barbershop Canyon include rainbow trout, brown trout, brook trout, flathead minnows, and golden shiners. The trout were introduced to provide sport fishing opportunities and the Arizona Game and Fish presently identifies the waters in and around Barbershop Canyon as wild trout management areas. The flathead minnows and golden shiners were probably introduced into the system by anglers using them as live bait.

The US Fish and Wildlife Service considers the East Clear Creek drainage including Barbershop Canyon as critical habitat for the Little Colorado Spinedace, a fish that is federally listed as threatened under the Endangered Species Act. Historically, spinedace were found in East Clear Creek near the mouth of Barbershop Canyon.

Heritage Resources: Barbershop Canyon has little heritage value. One historic period Forest Service Trail is the only known site within its corridor. Site densities are predicted to be very low, with a high degree of reliability for this prediction. Non Forest Service related sites that may be present will likely be historic period sites used on a seasonal basis in connection with cattle herding, although there is a low possibility for 19th Century military scatters.

On the east slope of the canyon near Barbershop springs, there was a sheep shearing plant. One of the men who worked the plant was a good barber who cut the sheepherders hair and thus the name Barbershop Canyon.

LAND USES AND DEVELOPMENT

Land Ownership: Barbershop Canyon is located entirely in the Coconino National Forest. There are no private parcels bordering the corridor. River corridor acres are as follows:

<u>RIVER MILES</u>	<u>NF ACRES</u>	<u>PRIVATE</u>	<u>TOTAL ACRES</u>
11	3,500	-0-	3,500

(Acres estimate based on a rim to rim corridor.)

Water Rights and Water Resource Development: There are no private water rights that exist on either of these streams. The Coconino presently controls all access to these streams.

Transportation Facilities: Access to Barbershop Canyon is via Arizona State Highway 67 and Forest Road 95. Access roads within the canyon are limited with only one bridge spanning the canyon near the confluence with East Clear Creek. Most roads in the area around Barbershop Canyon run in a north-south direction, along ridgetops, running parallel to the canyon.

There are two Forest Service system trails which cross Barbershop Canyon. The Barbershop Trail crosses the southern portion of the canyon, near Barbershop Springs while the U-Bar trail crosses the canyon near the confluence with Merritt Draw.

Recreation Activities: Barbershop Canyon receives low to moderate recreational use per year. There are no developed recreational sites in the canyon and access to the canyon is difficult in places.

Popular recreational activities in and around Barbershop Canyon include backpacking, hiking, sightseeing, fishing, and hunting.

Current Special Use Management Designation: There are no mineral production sites, mining claims, geothermal sites, or oil and gas leases in the canyon corridor. There are no facilities under Forest Service special use permits or easements. None of the corridor is within designated wilderness.

Livestock Grazing and Agriculture: Barbershop Canyon is located in the Buck Spring grazing allotment. One allotment pasture fence runs parallel to the canyon's west side and enters the corridor near Barbershop Springs, but is primarily located on the ridge outside the proposed corridor. An additional drift fence falls into the east side of the canyon from Floyd Corral near spring tank.

There are no opportunities for agricultural activities in Barbershop Canyon.

Special Land Uses: There are no special land uses authorized in the canyon.

Timber Harvest: Lands within Barbershop Canyon are listed as unsuitable (physically unsuited or not capable), forested lands inappropriate for harvest, and suitable timber lands. Most of Barbershop Canyon is classified in the Coconino National Forest Forest Land and Resource Management Plan (FLRMP), as being in Management Area #4 (MA #4). Characteristics of MA #4 include a ponderosa pine and mixed conifer canopy on greater than 40% slope. Timber harvest activities in MA #4 were not planned for the first two decades of the FLRMP planning period.

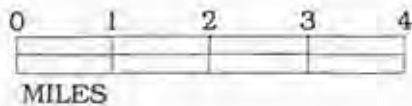
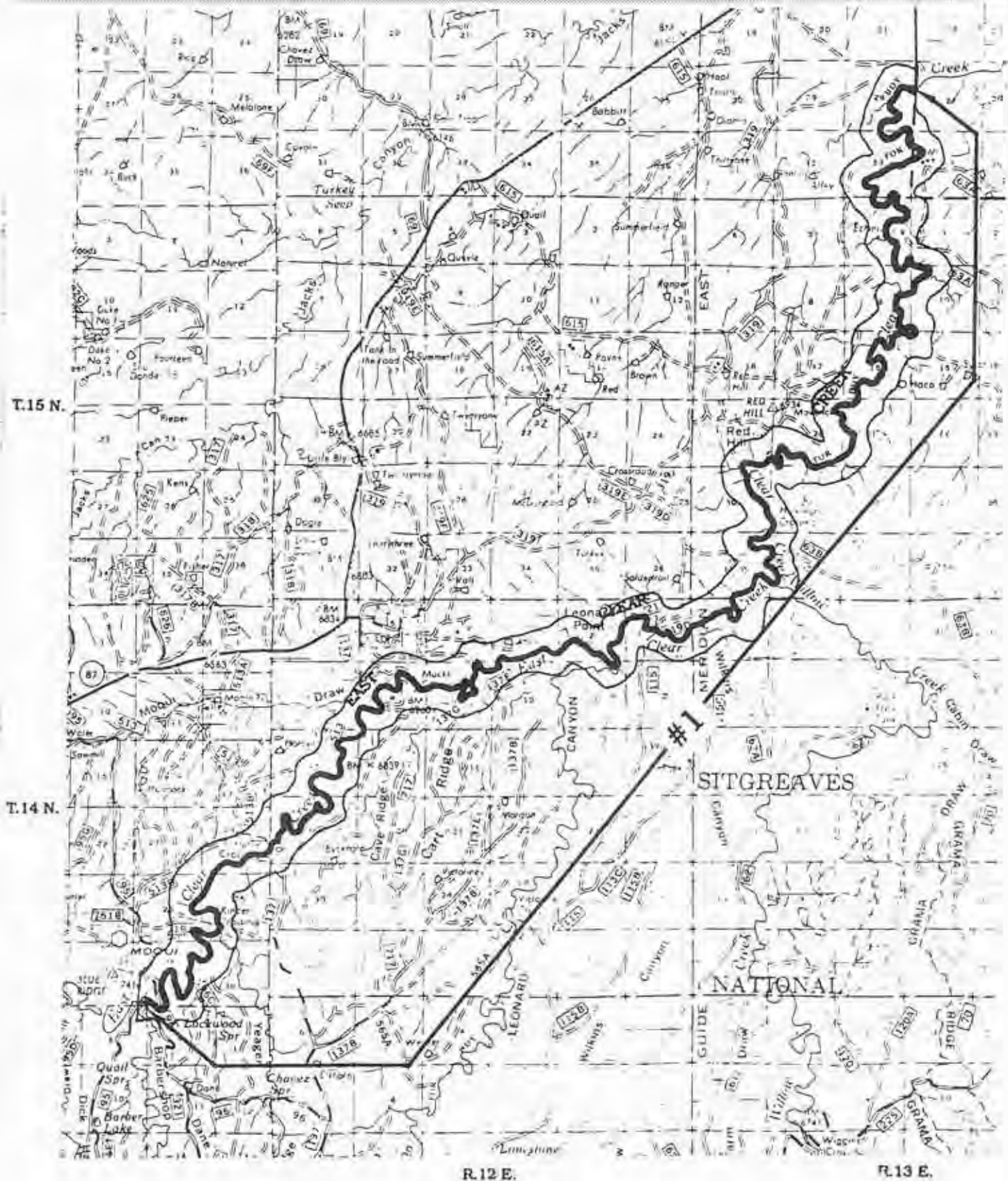
A small portion of the canyon has been logged in the past near the southern end of the corridor where slopes are more gradual and the canyon is shallow.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of Flagstaff, Winslow, Pine/Strawberry, and the Verde Valley. Most of the users come from Arizona. Scenic beauty and relief from the heat of the Phoenix valley as well as big game hunting opportunities are the most common reasons for visiting Barbershop Canyon.

EAST CLEAR CREEK

EAST CLEAR CREEK



EAST CLEAR CREEK

LOCATION

East Clear Creek is located on the Coconino National Forest, as well as state and private land in Coconino and Navajo Counties of Arizona. The origin is just north of the Mogollon Rim where the stream flows northward approximately 65 miles to its confluence with the Little Colorado River as a part of the Little Colorado River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 38 miles of East Clear Creek from the crossing of Forest Road 96 to the Forest boundary were evaluated for potential Wild and Scenic River designation. East Clear Creek is impounded to form Blue Ridge Reservoir 5 to 7 miles below its origin. The segment that was evaluated begins about 2 1/2 miles below the reservoir and is free flowing to the point where it leaves the Forest. Two outstandingly remarkable values were identified for this segment:

1. **Fisheries Habitat Values** - East Clear Creek contains populations of Little Colorado Spinedace, *Lepidomeda vittata*. The creek has been designated as critical habitat for this species which has been designated threatened under both state and federal species classification.
2. **Scenic Values** - East Clear Creek is noted for its scenic beauty. It has formed an narrow canyon with rocky cliffs and a variety of colors and textures due to the vegetative species variation and geologic formations.

This segment was determined to be potentially eligible with a scenic classification. A total of 9,800 acres are contained within the stream corridor, of this total 4,000 acres are on the Apache-Sitgreaves National Forest, 4100 acres are on the Coconino National Forest and 1,700 acres are on private land.

DESCRIPTION OF RESOURCES AND VALUES

Geology: East Clear Creek, like the streams in Barbershop and Leonard Canyons which flow into it, has cut the Cenozoic basaltic cap and exposed the horizontal sedimentary layers of the Colorado Plateau. The upper portion has cut the Hickey Formation, a mid-Tertiary Basalt, exposed outcroppings of Rim gravels which is a Cenozoic sedimentary deposit before down cutting into the Moenkopi Sandstone, the Kaibab Limestone and the Toroweap Formation all of which are typical layered deposits of the Colorado Plateau.

Drainage here is dendritic, branching like a tree, and northbound toward the Little Colorado River. East Clear Creek has incised twisting clefts through the Kaibab Formation, clefts that may be collapsed underground solution channels in the relatively soluble limestone.

Streamflow: The section of East Clear Creek that is being considered for designation has been monitored for the rate of stream flow for a period of 42 years. A USGS gauging station is located two miles down stream from the Willow Creek junction (SE, SE, Section 19, T15N, R13E). The station was put into operation in June, 1947 and continuously monitored stream flow until June, 1991. The mean flow rate was 83.1 cfs over the period of operation, with the lowest yearly mean flow rate of 5.78 cfs occurring in 1990.

Vegetation: The northern aspects of East Clear Creek are cool and moist, supporting a mixed conifer climax community. The upper canopy is dominated by Douglas fir, white fir, and ponderosa pine, while lesser amounts of Southwestern white pine, Rocky Mountain juniper, and Gambel oak fill out the thick canopy. Oregon grape, Gambel oak and mountain lover dominate the shrub layer while fringed sagebrush dominates the forb layer. Arizona fescue, mountain muhly, and bottlebrush squirreltail are the dominant grasses.

The southern aspects of East Clear Creek are warmer and dryer, supporting a ponderosa pine community. Ponderosa pine dominates the tree canopy with small amounts of Gambel oak and Rocky Mountain juniper present. Gambel oak dominates the shrub layer while western yarrow inhabits the forb layer. Grasses are represented by Arizona fescue, mountain muhly, mutton grass, and bottlebrush squirreltail.

From the confluence with Leonard Canyon to the Forest boundary the canyon is dominated by piñon pine, one-seed juniper, Utah juniper, and alligator juniper in the canopy. Cliff rose inhabits the shrub layer with pointbrush, alpine fleabane, and redroot wild buckwheat in the forb layer. Blue grama dominates the grass layer with sideoats grama, hairy grama, mutton grass, bottlebrush squirreltail, sand dropseed, and needle and thread grass present.

The bottom of East Clear Creek consists of healthy stands of canyon hardwoods. The primary vegetation found in the canyon bottoms consists of thinleaf alder, willow, box-elder, narrowleaf cottonwood, New Mexico locust, and Arizona walnut.

The landscape beyond East Clear Creek consists of a mixed conifer climax community near the confluence with Barbershop Canyon, changing to a ponderosa pine dominated community as the stream flows northward. On exposed sites and near the confluence with Leonard Canyon, a transition zone between the ponderosa pine dominated community and the pinyon pine/juniper dominated community exists. Further northward towards the Coconino Forest Boundary, the pinyon pine/juniper community dominates.

Fisheries and Wildlife: East Clear Creek provides summer range for game species such as deer, elk, and turkey. The canyon, with its dense cover provides travel ways and reproductive habitat near dependable water sources. In addition, hunting territory for bear, mountain lion, and various raptor species is provided by the canyon. The landscape beyond the canyon consists of open canopied ridges which supply forage for deer and elk. Ridgeline margins parallel thick cover on canyon slopes which provide nesting and brood areas for turkey.

A variety of ground, tree, and cavity nesting birds utilize the canyon area, as do many small mammal species such as rabbits, skunks, porcupine, Abert squirrels, red squirrels, woodrats, and other rodents. These in turn supply food for raptors and carnivores such as fox, coyote, bobcat, and mountain lion.

There are a number of Threatened, Endangered, and Sensitive species that utilize East Clear Creek for forage and nesting areas. These include bald eagles, Mexican spotted owls, flammulated owls, peregrine falcons, Northern goshawks, and other raptors including Cooper's hawks and sharp shinned hawks.

East Clear Creek is a fish bearing water with native fish species found in the area including speckled dace, bluehead suckers, and flannelmouthed suckers.

Exotic fish species in East Clear Creek include rainbow trout, brown trout, brook trout, flathead minnows, and golden shiners. The trout were introduced to provide sport fishing opportunities and the Arizona Game and Fish presently identifies the waters in and around East Clear Creek as wild trout management areas. The flathead minnows and golden shiners were probably introduced into the system by anglers using them as live bait.

The US Fish and Wildlife Service considers the East Clear Creek drainage including the proposed segment as critical habitat for the Little Colorado Spinedace, a fish that is federally listed as threatened under the Endangered Species Act. Historically, spinedace have been found in East Clear Creek.

Heritage Resources: The southern half of East Clear Creek has a predicted low to moderate site density. This prediction is of moderate reliability. Sites in this southern half are mostly from the Euroamerican historic period after 1900 and are related to cattle ranching and Forest Service administration. However, the northern half of East Clear Creek, which is lower in elevation than the southern half, is generally high to very high in predicted site density with an excellent reliability for this prediction. East Clear Creek appears to form a boundary between the prehistoric Sinagua culture, to the west, and the Kayenta and Winslow Puebloan traditions to the east. Rock shelters are the most numerous site type in this northern half, although field houses, 4 to 12 room pueblos, and "forts" are also known. Most of the prehistoric sites date to the A.D. 1150 to 1350 time period. Several early Euroamerican cabins, dating to the 1890's and early 1900's, are also known. The entire stretch of East Clear Creek has traditional and religious importance to the Hopi people.

LAND USES AND DEVELOPMENT

Land Ownership: East Clear Creek becomes the geographical boundary between the Coconino National Forest and the Apache Sitgreaves National Forest at the confluence of Leonard Canyon. There are a number of private parcels bordering the corridor. River corridor acres are as follows:

<u>RIVER MILES</u>	<u>NF ACRES</u>	<u>PRIVATE</u>	<u>TOTAL ACRES</u>
38	4,100 - Coconino 4,000 - A-S	1,700	9,800

(Acreage estimate based on a rim to rim corridor.)

Water Rights and Water Resource Development: The water rights situation on East Clear Creek below Blue Ridge Reservoir is somewhat confusing. In 1985 the Coconino National Forest filed for a .1 cfs instream flow water right that has been protested by Phelps Dodge Corporation and Salt River Project. In their protest, they cite a court case of St. Johns Irrigation & Ditch Company v. Arizona Water Commission, 127 Ariz. 350, 621 P.2d 37 (Cl.App.1980), and indicates the decision in the St. Johns case has determined that there is no surplus water available for appropriation in the Little Colorado River Watershed. The Arizona Department of Water Resources show no listing of water rights for the segment of East Clear Creek that is being considered for designation.

Transportation Facilities: Access to East Clear Creek is via Arizona State Highway 87 and Coconino National Forest Roads 95 and 319. Access roads within the canyon are limited with only one negotiable crossing near Macks Crossing. Most roads in the area around East Clear Creek Canyon run in a north-south direction, along ridgetops, running parallel to the canyon.

There are four Forest Service system trails which cross East Clear Creek. These include the Kinder Crossing, Horse Crossing, Macks Crossing, and Hamilton Crossing trails.

Recreation Activities: East Clear Creek receives low to moderate recreational use per year. There are no developed recreational sites in the canyon and access to the canyon is difficult in most places.

Popular recreational activities in and around East Clear Creek include backpacking, hiking, sightseeing, fishing, and hunting.

Current Special Use Management Designation: A water gauging station is located in East Clear Creek Canyon in the south-east corner of section 19, T15N, R13E, near Red Hill.

There are no mineral production sites, mining claims, geothermal sites, or oil and gas leases in the canyon corridor. There are no facilities under Forest Service special use permits or easements.

None of the river corridor is within designated wilderness.

Livestock Grazing and Agriculture: East Clear Creek is located in the Buck Springs, Moqui, and Red Hill grazing allotments on the Coconino National Forest. Allotment boundary fences, pasture fences, and drift fences from all three allotments can be found in East Clear Creek Canyon.

There are no opportunities for agricultural activities in East Clear Creek.

Timber Harvest: Lands within East Clear Creek are listed as unsuitable (physically unsuited or not capable), forested lands inappropriate for harvest, and suitable timber lands. Most of East Clear Creek is classified in the Coconino National Forest Forest Land and Resource Management Plan (FLRMP), as being in Management Area #4 (MA #4). The characteristics of MA #4 include ponderosa pine and mixed conifer canopy species on greater than 40% slope. Timber harvest activities in MA #4 were not planned for the first two decades of the FLRMP planning period.

Management Area #8 is also represented in East Clear Creek Canyon. Management area #8 is characterized by pinyon pine/juniper woodlands on slopes over 40%. Steep canyons and exposed rock make these areas unsuitable for timber production and some kinds of recreation.

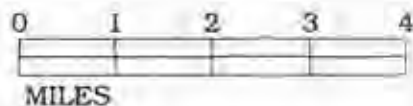
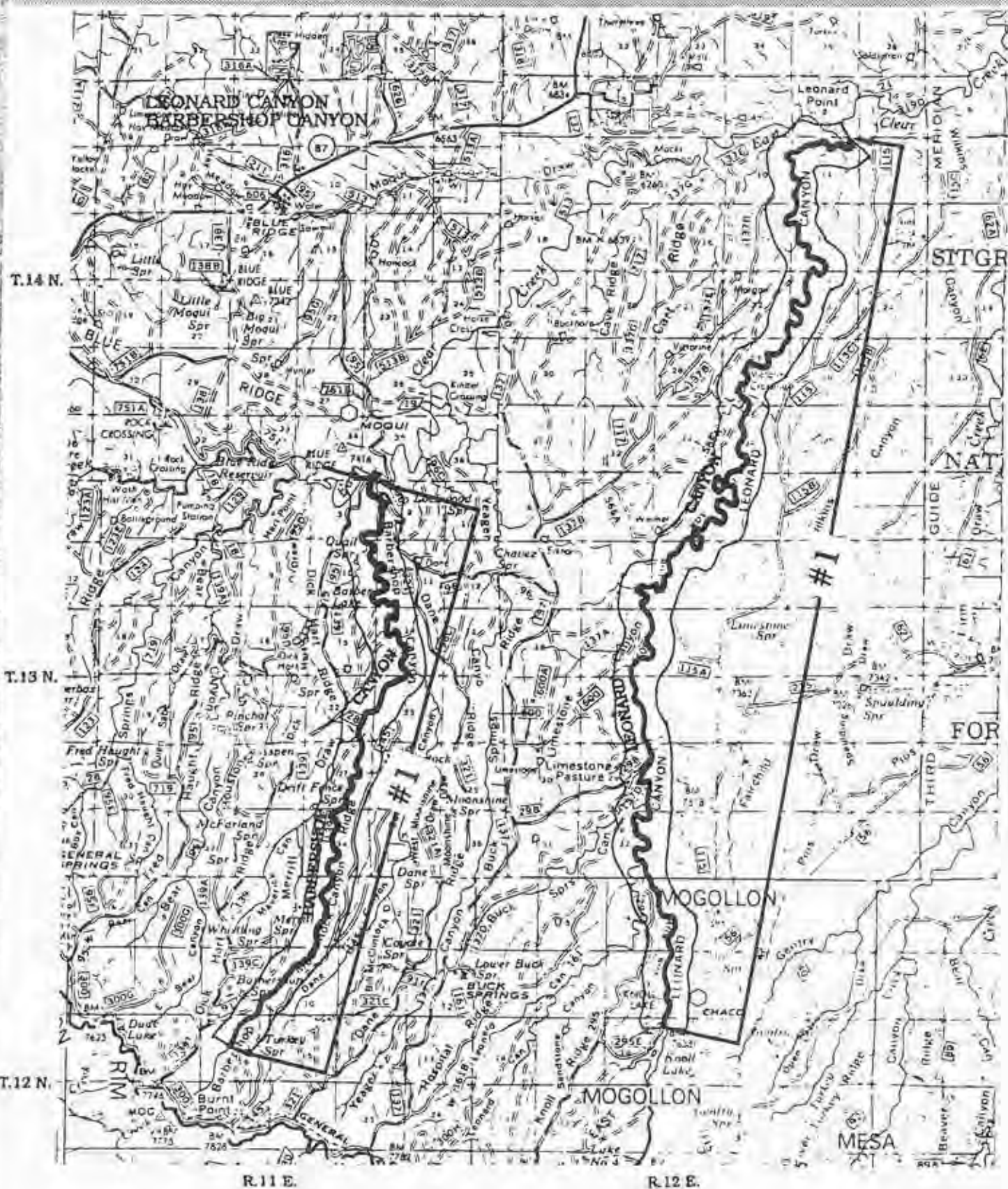
Steep slopes, surface rock fragments, and the presence of rock outcrops, precludes most management activities in the canyon.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of Flagstaff, Winslow, Pine/Strawberry, and the Verde Valley. Most of the users come from Arizona. Scenic beauty and relief from the heat of the Phoenix valley as well as big game hunting opportunities are the most common reasons for visiting East Clear Creek.

LEONARD CANYON

LEONARD CANYON



LEONARD CANYON

LOCATION

Leonard Canyon is located on the Coconino National Forest in Coconino County, Arizona. The origin is just north of the Mogollon Rim from where the stream flows northward approximately 27 miles to its confluence with East Clear Creek as part of the Little Colorado River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 24 miles of Leonard Canyon from below the dam at Knoll Lake to the confluence with East Clear Creek were evaluated for potential Wild and Scenic River designation. Leonard Canyon is impounded to form Knoll Lake approximately three miles below its headwaters. It is free flowing from below the dam to its confluence with East Clear Creek. A single outstandingly remarkable value was recognized in this stream segment:

1. **Fisheries Habitat Values** - The segment contains populations of the Little Colorado Spinedace, *Lepidomeda vittata* a native fish classified as threatened under both State and Federal species classification.

This segment was determined to be preliminarily eligible and classified as Recreational. About 6100 acres are contained within the stream corridor. Of this total, 640 acres are on private land, 2,860 acres are on the Apache-Sitgreaves National Forest and the remaining 2,600 acres are on the Coconino National Forest.

DESCRIPTION OF RESOURCES AND VALUES

Geology: Leonard Canyon like Barbershop Canyon is a fairly youthful canyon which has cut through the Cenozoic basalt cap to the horizontal sedimentary layers which typify the Colorado Plateau Region. The process of differentiated erosion has created cliffs, scarps and bluffs all which form the canyon proper. The geologic process of erosion has also revealed the geologic past represented by the Moenkopi Sandstone Formation Kaibab Limestone Formation, the Toroweap Formation and others all of which are also exposed in the Grand Canyon of the Colorado River.

Drainage: here is dendritic, branching like a tree, and northbound toward the Little Colorado River. Leonard Canyon has incised twisting clefts through the Kaibab Formation, clefts that may be collapsed underground solution channels in the relatively soluble limestone.

Streamflow: Leonard Canyon is free flowing for it's entire length except for a water impoundment (stock/wildlife tank) at Dines Tank located in section 28, T13N, R12E. Streamflow is intermittent during low water years.

Vegetation: The northern aspects of Leonard Canyon are cool and moist, supporting a mixed conifer climax community. The upper canopy is dominated by Douglas fir, white fir, and ponderosa pine, while lesser amounts of Southwestern white pine, Rocky Mountain juniper, and Gambel oak fill out the thick canopy. Oregon grape, Gambel oak and mountain lover dominate the shrub layer while fringed sagebrush dominates the forb layer. Arizona fescue, mountain muhly, and bottlebrush squirreltail are the dominant grasses.

The southern aspects of Leonard Canyon are warmer and dryer, supporting a ponderosa pine community. Ponderosa pine dominates the tree canopy with small amounts of Gambel oak and Rocky mountain juniper present. Gambel oak dominates the shrub layer while western yarrow inhabits the forb layer. Grasses are represented by Arizona fescue, mountain muhly, mutton grass, and bottlebrush squirreltail.

The dryer sites near the confluence with East Clear Creek are dominated by pinyon pine, oneseed juniper, Utah juniper, and alligator juniper in the canopy. Cliff rose inhabits the shrub layer with paintbrush, alpine fleabane, and redroot wild buckwheat in the forb layer. Blue grama dominates the grass layer with sideoats grama, hairy grama, mutton grass, bottlebrush squirreltail, sand dropseed, and needle and thread grass present.

The bottom of Leonard Canyon consists of healthy stands of canyon hardwoods. The primary vegetation found in the canyon bottoms consists of thinleaf alder, willow, box-elder, Rocky Mountain maple, narrowleaf cottonwood, New Mexico locust, and Arizona walnut.

The landscape beyond Leonard Canyon consists of a mixed conifer climax community near the canyon origin, changing to a ponderosa pine dominated community as the stream flows northward towards East Clear Creek. On exposed sites and near the confluence with East Clear Creek a transition zone between the ponderosa pine dominated community and the pinyon pine/juniper dominated community exists.

Fisheries and Wildlife: Leonard Canyon provides summer range for game species such as deer, elk, and turkey. The canyon, with its dense cover provides travel ways and reproductive habitat near dependable water sources. In addition, hunting territory for bear, mountain lion, and various raptor species is provided by the canyon. The landscape beyond the canyon consists of open canopied ridges which supply forage for deer and elk. Ridgeline margins parallel thick cover on canyon slopes which provide nesting and brood areas for turkey.

A variety of ground, tree, and cavity nesting birds utilize the canyon area, as do many small mammal species such as rabbits, skunks, porcupine, Abert squirrels, red squirrels, woodrats, and other rodents. These in turn supply food for raptors and carnivores such as fox, coyote, bobcat, and mountain lion.

There are a number of Threatened, Endangered, and Sensitive species that utilize Leonard Canyon for forage and nesting areas. These include bald eagles, Mexican spotted owls, flammulated owls, peregrine falcons, Northern goshawks, and other raptors including Cooper's hawks and sharp shinned hawks.

Leonard Canyon is a fish bearing water with native fish species found in the area including speckled dace, bluehead suckers, and flannelmouthed suckers.

Exotic fish species in Leonard Canyon include rainbow trout, brown trout, brook trout, flathead minnows, and golden shiners. The trout were introduced to provide sport fishing opportunities and the Arizona Game and Fish presently identifies the waters in and around Leonard Canyon as wild trout management areas. The Flathead minnows and golden shiners were probably introduced into the system by anglers using them as live bait.

The US Fish and Wildlife Service considers the East Clear Creek drainage including Leonard Canyon as critical habitat for the Little Colorado Spinedace, a fish that is federally listed as threatened under the Endangered Species Act. Historically, spinedace have been found in the Dines Tank area.

Heritage Resources: The heritage value of the Leonard Canyon drainage differs from its northern half to its southern half. The northern half is lower in elevation and has a site density prediction of low to moderate, as opposed to the southern half, which is higher in elevation and has a density prediction of low to very low. Reliability of this prediction is considered good. Historic period Euro-american sites would be more numerous in the southern half, while prehistoric Sinagua sites, dating from approximately A.D. 900 to 1400, would be more common in the northern end. Known historic sites include cabins, corrals, and a sheep dip, while known prehistoric sites include flaked stone (lithic) scatters, rock art (both petroglyphs, or designs carved or hammered into stone, and pictographs, designs painted onto stone), and a cliff dwelling. The northern part of Leonard Canyon also has cultural and religious significance to the Hopi Indians.

Leonard Canyon was named for W. B. Leonard, well known sheepman who was also an Apache County commissioner during the 1830's.

LAND USES AND DEVELOPMENT

Leonard Canyon is the geographical boundary between the Coconino National Forest and the Apache Sitgreaves National Forest. There are a number of private parcels bordering the corridor. River corridor acres are as follows:

Land Ownership:

<u>RIVER MILES</u>	<u>NF ACRES</u>	<u>PRIVATE</u>	<u>TOTAL ACRES</u>
17	2,600 - Coconino 2,860 - A-S	640	6,100

(Acreage estimates based on a rim to rim corridor.)

Water Rights and Water Resource Development:

The stream course which follow Leonard Canyon runs through a mixture of private and national forest lands. 10.2 acre feet of water has been claimed for private use by land owners with property adjacent to the stream. The source of water is either from the stream or springs that contribute directly to the stream flow. Leonard Canyon is part of the Little Colorado River Watershed and according to the court case of St. Johns Irrigation & Ditch Company v. Arizona Water Commission, 127 Ariz. 350, 621 P.2d 37 (Ct.App.1980), the decision in this case has indicated that there is no surplus water available for appropriation within the watershed.

Transportation Facilities: Access to Leonard Canyon is via Arizona State Highway 87 and Coconino National Forest Roads 95, 96, 137, 298, and 295. Access roads within the canyon are limited with only one negotiable crossing near Dineen Tank. Most roads in the area around Leonard Canyon run in a north-south direction, along ridgetops, running parallel to the canyon.

There is one Forest Service system trail which crosses Leonard Canyon. The Victorine Crossing trail traverses Leonard Canyon near Leonard Point.

Recreation Activities: Leonard Canyon receives low to moderate recreational use per year. There are no developed recreational sites in the canyon and access to the canyon is difficult in most places.

Recreational activities in and around Leonard Canyon include backpacking, hiking, fishing, and hunting.

Current Special Use Management Designation: There are no mineral production sites, mining claims, geothermal sites, or oil and gas leases in the canyon corridor. There are no facilities under Forest Service special use permits or easements.

None of the river corridor is within designated wilderness.

Livestock Grazing and Agriculture: Leonard Canyon is located in the Buck Spring and Moqui grazing allotments on the Coconino National Forest. The East allotment boundary fence for the Buck Springs and Moqui allotments, runs parallel to the canyon, crossing the canyon at times between the Coconino and Apache/Sitgreaves National Forests. Pasture fences connect to these boundary fences.

There are no opportunities for agricultural activities in Leonard Canyon.

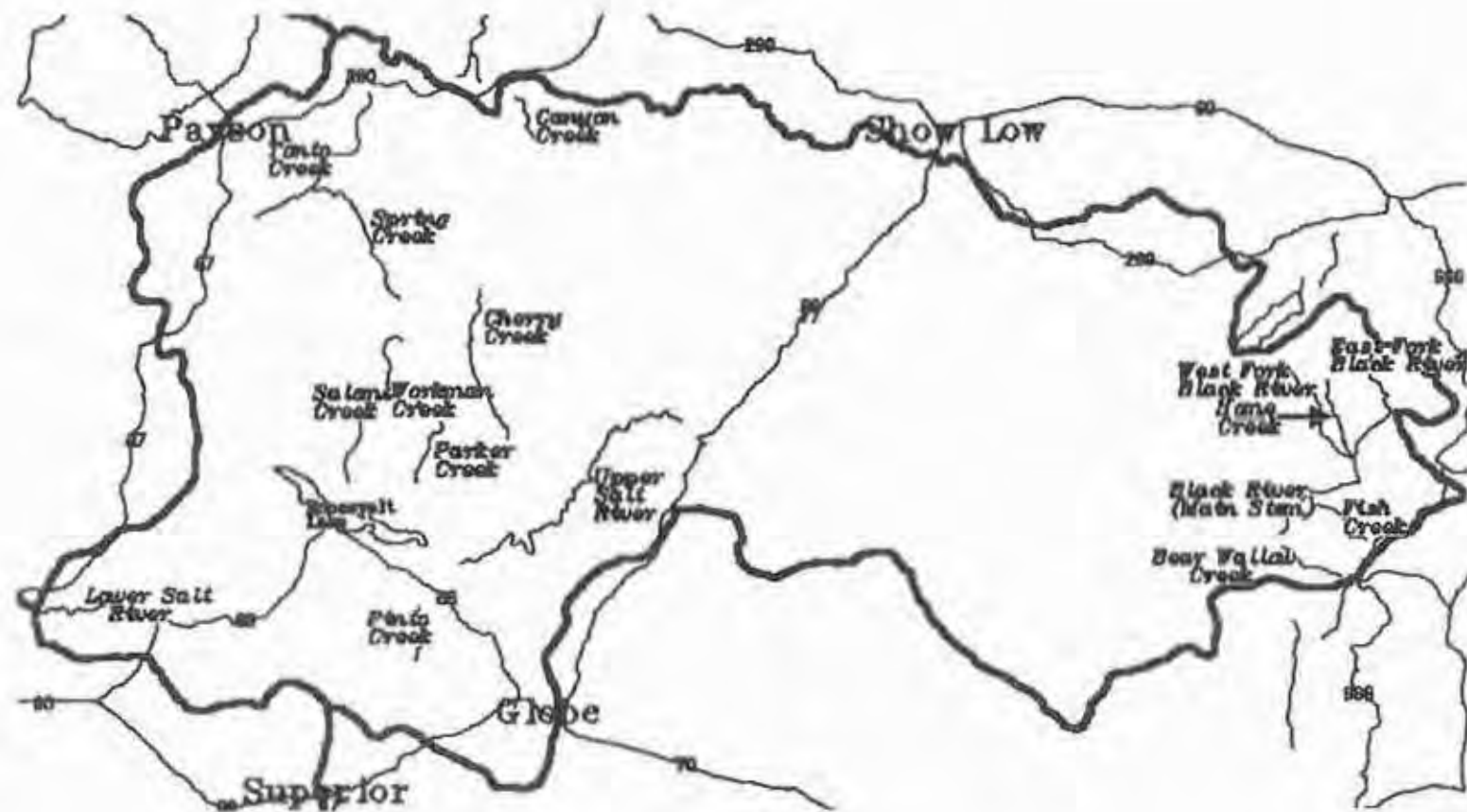
Timber Harvest: Lands within Leonard Canyon are listed as unsuitable (physically unsuited or not capable), forested lands inappropriate for harvest, and suitable timber lands. Most of Leonard Canyon is classified in the Coconino National Forest Forest Land and Resource Management Plan (FLRMP), as being in Management Area #4 (MA #4). The characteristics of MA #4 include ponderosa pine and mixed conifer canopy species on greater than 40% slope. Timber harvest activities in MA #4 were not planned for the first two decades of the planning period.

A small portion of the canyon has been logged in the past near the southern end of the corridor where slopes are more gradual and the canyon is shallow.

Steep slopes, surface rock fragments, and the presence of rock outcrops, precludes most management activities in the canyon.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of Flagstaff, Winslow, Pine/Strawberry, and the Verde Valley. Most of the users come from Arizona. Scenic beauty and relief from the heat of the Phoenix valley as well as big game hunting opportunities are the most common reasons for visiting Leonard Canyon.



BEAR WALLOW CREEK

BEAR WALLOW CREEK

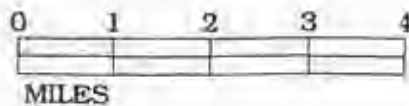


T.4 N.

T.3 N.

R.28 E.

R.29 E.



BEAR WALLOW CREEK

LOCATION

Name: Bear Wallow Creek County: Greenlee Forest: Apache-Sitgreaves

Bear Wallow Creek originates on the edge of the Mogollon Rim. From its origin, it flows northwesterly for approximately 10 miles to the Black River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 13 miles of Bear Wallow Creek from the origin on its north and south forks to the Forest boundary were evaluated for potential designation.

Eligible Segments: Entire Segment; Confluence of the north and south forks to Forest boundary: 4.2 miles

Eligibility: The Bear Wallow Creek is freeflowing with no impoundment or diversion.

The outstandingly remarkable values include: Entire Segment: Scenic, Riparian and Fish

Classification: Entire Segment: Wild

Total stream corridor (1/4 mile on each side) includes 1240 acres, of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology: The geology of this creek is of volcanic origin. Basalt and andesite from the Datil formation were deposited in large lava flows during the Quaternary-Tertiary periods. Between episodes of volcanic activity, sedimentary deposits were formed, either as crudely stratified sand and gravel deposits, or as breccias, sandstone, gravel and unsorted fragmental units deposited as mudflows.

Streamflow and Water Quality: No discharge data exists for Bear Wallow Creek. According to available information, this stream nearly always meets State water quality standards and only infrequently exceeds one parameter or another during relatively short durations (ie, turbidity). The test results for the elements and common chemical constituents are almost always within State standards.

Vegetation: Bear Wallow Creek supports riparian vegetation consisting of alder, various sedges, rushes, and grasses. The landscape on the south-facing slope above the creek is comprised of ponderosa pine, Gambel oak, pinyon pine/juniper, and various grasses. The landscape on the north-facing slope consists of Douglas fir, aspen, and spruce, and white fir.

About 61% of the area is in Douglas fir-white fir communities and 31% in pinyon-juniper communities. The riparian areas are type 231.61 or willow series and type 232.311 or Salix spp.-mixed deciduous association. There are 53 acres of natural riparian vegetation. Plant species diversity is high. Structural diversity includes groundcover, low and high shrubs, and low and high trees. The successional stage is climax. Threatened or endangered plant species in the general area include Goodding onion, Blumer's dock, Gila groundsel, and Mogollon clover.

The riparian resource is considered an outstandingly remarkable value due to its quality and extent.

Fisheries and Wildlife: Fish species that occur in this segment include Apache trout, rainbow trout, and speckled dace. Apache trout is the native indicator species and the sportfish indicator species. Wildlife habitat uniqueness is classified as uncommon and habitat diversity is rated as high. Wildlife species known in this area include: northern and lowland leopard frogs, northern goshawk, veery, band-tailed pigeon, blue grouse, willow flycatcher, turkey, flammulated owl, pine grosbeak, thick-billed parrot, spotted owl, coyote, spotted bat, bobcat, striped skunk, long-tail weasel, occult little brown bat, mule and white-tail deer, raccoon, Abert's squirrel, water shrew, black bear, Rocky Mountain elk, northern garter snake, and narrow-headed garter snake.

The fish resource is considered outstandingly remarkable due to the fine quality of the Apache trout habitat.

Visual Resources: The visual quality objective on Bear Wallow Creek is foreground retention. Its high scenic quality is considered outstandingly remarkable because of its pristine appearance within a heavily vegetated canyon.

Cultural and Historical Resources: No known cultural or historic sites exist.

Air Quality: Bear Wallow Creek has excellent air quality.

LAND USES AND DEVELOPMENTS

Land Ownership: Bear Wallow Creek is located in the Apache-Sitgreaves National Forest. There are no private parcels on this segment. River corridor acreage is 1240.

Water Rights and Water Resource Developments: Water is used downstream for purposes of irrigation by the Salt River Project and by the White Mountain and San Carlos Apaches. There is no diversion within this segment nor any proposed dams or dikes. Since this stream is within a designated wilderness area, no development is foreseen. Instream flow has not been measured.

Transportation Facilities: Access is limited to foot and horse travel on designated trails within Bear Wallow Wilderness. The stream corridor is accessed by Trail #63.

Recreation Activities: Recreation use is limited to that type of use normally associated with primitive opportunities (ie. hiking, backpacking, fishing, horseback riding). There are no developed recreation sites nor is the stream capable of supporting float trips. Recreation use is estimated at 2000 recreation visitor days.

Current Special Management Designations: This stream segment is within Bear Wallow Wilderness and is managed in accordance with the Apache Trout Recovery Plan.

Mining: The Bear Wallow Wilderness is withdrawn from mineral entry.

Special Land Uses: There are no special use facilities on or near this segment but the area is used by licensed and permitted outfitters and guides.

Livestock Grazing and Agriculture: There is one grazing allotment within this stream segment and it includes fences and a corral. One hundred and twenty-one animals are authorized to utilize this segment during the summer months but may not be all in the area at one time.

Timber Harvest: All lands within the stream segment are in Wilderness and therefore unavailable for timber harvest.

Other Activities: None

SOCIAL AND ECONOMIC VALUES

The local users of Bear Wallow Creek are from Alpine, Springerville, and Eagar. Non-local users come from Phoenix and Tucson and other cities of the Southwest.

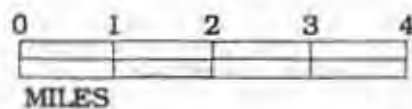
BLACK RIVER - MAIN STEM

BLACK RIVER - MAIN STEM



R.28 E.

R.29 E.



BLACK RIVER - MAIN STEM

LOCATION

Name: Black River, Main stem County: Greenlee Forest: Apache-Sitgreaves

The Black River originates at the confluence with the East Fork and West Fork of the Black River. Thence it flows southwesterly to the confluence with White River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 19 miles of Black River from the confluence of the East and West Forks of the Black River to the Forest boundary with the Fort Apache Indian Reservation were evaluated for potential designation.

Eligible Segments: # 1 - Confluence of E. & W. Forks to 1/4 mi. above bridge; 11 miles
2 - 1/4 mile upstream to 1/4 mile downstream of the bridge; 1/2 mile
3 - 1/4 mile downstream of bridge to Forest boundary; 7.3 miles

Eligibility: The Black River is freeflowing with no impoundment or diversion.

The outstandingly remarkable values include:

All segments: Scenic, Fish and Wildlife, Recreational, Riparian

Classification: Segment #1: Wild
#2: Scenic
#3: Wild

Total stream corridor (1/4 mile on each side) includes 5217 acres, of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology: The geology of this river is of volcanic origin. Basalt and andesite from the Datil formation were deposited in large lava flows during the Quaternary-Tertiary periods. Between episodes of volcanic activity, sedimentary rocks were formed, either as crudely stratified sand and gravel deposits, or as breccia, sandstone, gravel and unsorted fragmental units deposited as mudflows. These are evident in bands above the Black River near the bridge at Wildcat Crossing.

Streamflow and Water Quality: Water quality data from EPA STORET indicates that the Black River does meet standards set by Arizona for cold water fisheries, full body contact, domestic water source, and agricultural irrigation and livestock watering. USGS station 09489100 located between Fish Creek and Conklin Creek measured the following: average discharge between 1962 and 1978 was 131 cfs; maximum discharge was 11,100 cfs on 10/20/72 and minimum flow was 9.6 cfs on 12/7/76.

Vegetation: In segment #1 the vegetation consists of 6% bunch grass communities, 21% Douglas fir - white fir communities, 2% mixed grass communities, and 71% pine communities. In segment #2 the vegetation consists of 79% Douglas fir - white fir communities and 21% pine communities. In segment #3 the vegetation consists of 3% bunch grass communities, 5% Douglas fir - white fir communities, and 92% pine communities. Known TES species on all segments include Goodding onion, Gila groundsel, and Mogollon clover. The stream-side vegetation includes willow and alder.

An outstandingly remarkable value is the quality and quantity of riparian vegetation.

Fisheries and Wildlife: Fish species include the Gila sucker and Gila mountain sucker; the brown, rainbow, brook, and cutthroat trout; and the speckled dace. Vertebrate wildlife species include: black bear, Rocky Mountain bighorn sheep, mountain lion, coyote, striped skunk, mule and white-tail deer, elk, and turkey. The diversity and quantity of wildlife is an outstandingly remarkable value.

Visual Resources: The highly scenic canyon of the Black River is an outstanding example of a riverine system in the Southwest. The visual quality objective of this canyon is foreground retention.

Cultural and Historical Resources: No known cultural or historical sites exist within any of the three segments.

Air Quality: Air quality is excellent.

LAND USES AND DEVELOPMENTS

Land Ownership: The river is located on National Forest lands in the Apache-Sitgreaves National Forests.

River Corridor Acreage (by segment)

Segment #1: 3086 NF acres

#2: 156 NF acres

#3: 1975 NF acres

Water Rights and Water Resource Developments: Downstream water is used for irrigation by the Salt River Project and the Fort Apache and San Carlos Apaches. There are no existing or proposed dams or dikes.

Transportation Facilities: The only road access to this canyon is at Wildcat Crossing on Forest Road 25, approximately 13 miles from U.S. Highway 191. A fisherman trail adjacent to the river crosses the river at a number of locations and is the only way to travel up or down stream. This primitive trail can accommodate hikers and horseback riders. Motor vehicles are not allowed.

Recreation Activities: Recreation activities include fishing, hiking, backpacking, and hunting. On occasion, adventurers have floated this section of the river in the Spring snow melt. There are no developed sites on or near the river but many sightseers use the Bridge at Wildcat Crossing as a starting point to explore the canyon.

Current Special Management Designations: The area is closed to motor vehicles except for a small area at the bridge.

Mining: There are no mines or evidence of past mining activities.

Special Land Uses: There are no special use facilities in this canyon. There has been limited use by permitted outfitters and guides for fishing activities.

Livestock Grazing and Agriculture: These segments are grazed by 46 horses in the Sprucedale-Reno allotment, mostly in the fall, winter and spring. There are two fences that cross these segments.

Timber Harvest: There are approximately 7176 acres of land within or near these segments that have been classified by the Forest Land Management Plan as being in the category of "not capable, available, or suitable" for timber harvest.

Other Activities: None

SOCIAL AND ECONOMIC VALUES

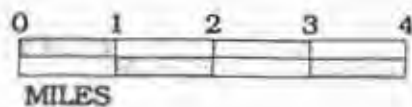
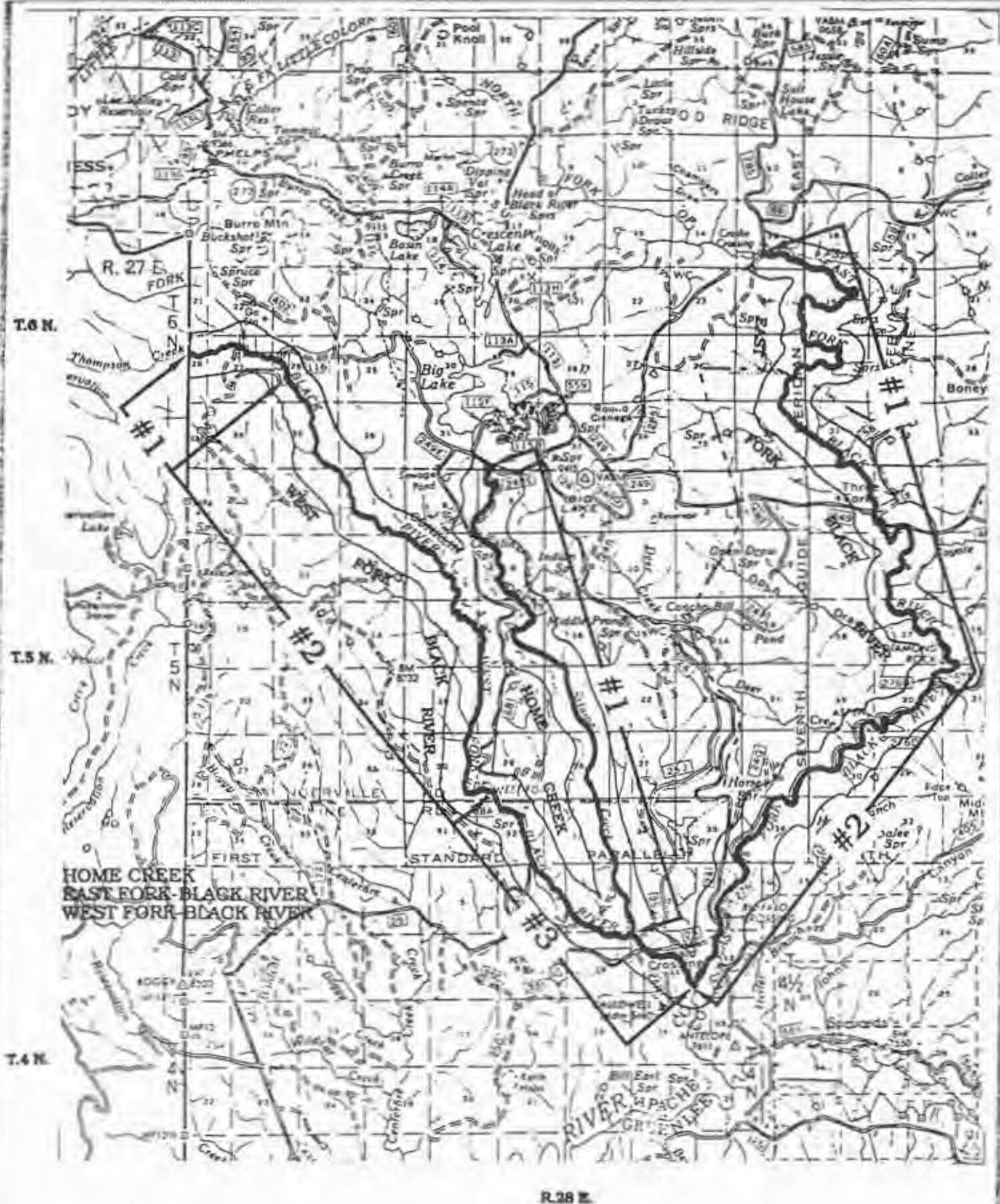
The local users are from Alpine, Springerville, and Eagar. Non-local users come from Phoenix, Tucson, and other cities of the Southwest.

SUPPLEMENTAL INFORMATION

Recommended for Wild and Scenic Designation in the Apache-Sitgreaves Forest Plan.

WEST FORK - BLACK RIVER

WEST FORK BLACK RIVER



WEST FORK-BLACK RIVER

LOCATION

West Fork-Black River - Apache County, Apache-Sitgreaves National Forests.

The West Fork-Black River originates at Mount Baldy Peak on the Fort Apache Indian Reservation. It flows east to the Apache-Sitgreaves National Forests Boundary where it flows southeast 14 miles to join the East Fork Black River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

A. Segment Found Potentially Eligible for Designation:

Approximately 14.0 miles of the West Fork-Black River, from the forest boundary to the confluence of the East Fork Black River, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments

Segment 1

3 Miles
from forest boundary (Section 21, T6N, R27E) to
Forest Road 116 (Section 26, T6N, R27E.)

Segment 2

7 Miles
from Forest Road 116 (Section 26, T6N, R27E) to
West Fork Campground (Section 29, T5N, R28E)

Segment 3

4 Miles
from West Fork Campground (Section 29, T5N, R28E) to East Fork Black River (Section 11, T4N, R28E)

B. Eligibility:

Segments 1, 2, and 3 are free flowing and without impoundment or diversions.

The outstandingly remarkable values include: scenic, recreational, fish, wildlife, historical, riparian, ecological.

Segment 1 - scenic, recreational, fish.

This segment starts at the National Forest boundary and flows southeast to Forest Road 116. Approximately 0.5 mile flows through private land. The Apache trout is an important fishery in this segment. Douglas-fir, white fir, aspen, spruce, and alpine meadows provide for scenic hiking and fishing.

Segment 2 - scenic, recreational, fish, wildlife, historic, riparian, ecological.

This segment flows from Forest Road 116 to West Fork Campground. It is accessible by foot or on horseback. Recreational uses include hunting, fishing, and limited bicycling. The year around water is important for wildlife and fisheries. Geologic features include cliffs and rock slides. This is a Blue Ribbon Fishery for brown trout.

Segment 3 - recreational, fish, historic.

This stretch is heavily used for hiking, fishing, and camping. It flows from the West Fork Campground to the East Fork Black River. The river canyon opens up at this point and flows through large meadows until it reaches Forest Road 25 where it enters a canyon to flow down to the East Fork Black River.

C. Classification:

Segment 1 - Scenic
Segment 2 - Wild
Segment 3 - Recreational

The total river corridor (1/4 mile on each side) includes approximately 4,480 acres, of which the National Forest administers 86%.

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Volcanism has controlled the development of the present day landscape in the areas of the proposed wild and scenic river. Mt. Baldy rises above the surrounding lava plateau about 2200 feet. It is composed mainly of latite. Two distinct lava flows occurred approximately 10 and 8.6 million years ago separated by the Sheep's Crossing Formation. The Sheep's Crossing Formation consists of patches of sediments found commonly near the mouths of the larger valleys. The deposit has been eroded and may only exist in areas protected by overlying basalt. It was formed from volcanic debris and pieces of solidified lava set in motion by either explosions or precipitation. The debris traveled down drainages quickly, picked up large boulders and formed large colluvial fans. Two distinct members are found in this formation. The lower member of the formation appears as breccia, sandstone, gravel, airfall tephra, and abundant unsorted fragmental units deposited by mudflows. The upper member is characterized by the crudely stratified, poorly sorted sand and gravel, as seen near the old railroad grade near Thompson Ranch along Burro Creek. (Merrill, 1984).

Surrounding Mt. Baldy, large areas of basalt flow away from the lava cone. Basalt of this age overlies the early volcanic rocks and the Mt. Baldy volcanic rocks. Younger basaltic rocks occur as cinders, agglomerate, intrusive and extrusive rocks. The maximum thickness of basalt exposed in the valley of the Little Colorado River north of Greer is greater than 150 meters. Local accumulations of cinders in some of the more than 170 cinder cones may exceed 200 meters in height (Merrill 1984).

At least 4 times in the last 200,000 years, glaciers have formed in the upper valleys of the Little Colorado and Black rivers. These have produced cirques, side-glacial channels, U-shaped valleys, and have left well-formed moraines and scattered gravel deposits to mark their former positions (Pewe, 1984). These can be recognized above Sheep's Crossing and Lee Valley Reservoir along the East and West Forks of the Little Colorado River and along the upper Black River drainage.

B. Streamflow and Water Quality:

Streamflow is year-round but will increase during spring run-off and summer rains. No data is available to estimate median or duration of flows. Water Quality: No data is available.

C. Vegetation:

TES Species:

Allium goodingii (Gooding onion)
Castilleja mogollonica (White Mountain Paint Brush)
Salix arizonica (Arizona Willow)

Plant diversity is high as the river ranges from 7300 to 9100 feet. Structural diversity is high as all size classes are represented.

The landscape surrounding segment 1 is dominated by large alpine meadows and mixed conifer (aspen, white fir, Douglas-fir, corkbark fir, spruce). The channel consists primarily of willows.

The landscape surrounding segment 2 is dominated by mixed conifer and ponderosa pine. The channel consists, at least partly, of the following: Douglas-fir, spruce, ponderosa pine, willow, alder, aspen.

The landscape surrounding segment 3 is dominated by ponderosa pine and large grasslands. The channel has ponderosa pine, willow, and alder.

D. Fish and Wildlife:

TES Species:

Accipiter gentilis (Northern goshawk)
Pandion haliaetus (osprey)
Oncorhynchus apache (Apache trout)
Haliaeetus leucocapillus (bald eagle)
Ceryle alcyon (belted kingfisher)
Strix occidentalis lucida (Mexican spotted owl)
Sorex palustris (water shrew)
Microtus montanus arizonensis (Arizona montane vole)
Thamnophis rufipunctatus (narrow-headed garter snake)
Zapus hudsonius luteus (New Mexican jumping mouse)

The great variety of habitat types provides for high diversity and abundance of wildlife species. The river has been designated as a Blue Ribbon Cold Water Fishery with fish structures and barriers being constructed in segment 1 to improve habitat for native Apache trout. The West Fork provides numerous nesting sites for raptors.

E. Visual Resources:

The diversity of plants and wildlife create an enjoyable view for hikers, anglers, hunters, campers, and bicyclists who use the area. Alpine meadows and stands of spruce and Douglas-fir provide cool temperatures for hiking and camping. Mount Baldy, to the west at 11,043 feet, contains the headwaters of the river. The fall colors of the aspen are a favorite for many people throughout the state. Where the West Fork-Black River meets the East Fork Black River, a steep canyon is formed with rock cliffs that provide an incredible view.

F. Cultural and Historical Resources:

Approximately half of the West Fork-Black River corridor has been inventoried for Cultural resources. Sites are not numerous due to high elevation and rugged terrain. Several prehistoric hunting camps on limited activity areas have been recorded along segments 1 and 2. Historic resources include at least two early ranches or homesteads, and Civilian Conservation Corps (CCC) campground improvements at West Fork campground. The abandoned bed of the former Apache Railroad traverses the area.

G. Air Quality:

No data available.

LAND USES AND DEVELOPMENTS

A. Land Ownership: The river is located in the Apache-Sitgreaves National Forests. There are two parcels which are private and state owned. Segment 1 is 3 miles and 960 acres, segment 2 is 7 miles and 2,240 acres, and segment 3 is 4 miles and 1,280 acres. There are approximately 120 acres of private land in segment 1 (sections 26, 27, T6N, R27E) and 293 acres of state land in Segment 3 (sections 3, 4, T4N, R28E).

B. Water Rights and Water Resource Developments: The river is free of diversions and impoundments.

C. Transportation Facilities: Vehicle access in segment 1 is Forest Road 116 and a few small logging roads. Segment 2 is accessible by West Fork Trail #628 which is limited by the steep canyon walls, FR 116 on the north end and FR 68A on the south end. Most of this segment of the river itself is inaccessible except on foot. Forest Roads 68A, 68, and 25 and various small logging roads cross or parallel segment 3.

D. Recreation Activities: A variety of recreation activities occur along portions of the river: hiking, camping, fishing, hunting, horseback riding, bicycling. The West Fork Trail #628 is used June through August for hiking and bicycling. West Fork Campground borders the river in segment 3. The West Fork is best known for fishing and hunting.

E. Special Management Designations: A majority of segments 2 and 3 are in the West Fork-Black River Management Area.

F. Mining: There are no known oil or gas leases, no developed geothermal sites, no active mining operations or quarries in this segment.

G. Special Land Uses: Segment 3 - Sections 29, 32, T5N, R28E - West Fork-Black River Management Area - picnic/campground sites.

H. Livestock Grazing and Agriculture: The West Fork-Black River managed on the National Forest is open to grazing. It falls into the Burro Creek Allotment on the Springerville Ranger District and the PS Allotment on the Alpine Ranger District.

I. Timber Harvest: Approximately 1 mile and 320 acres of segment 1 is identified as suitable for harvest. The majority of segments 2 and 3 are managed as part of the West Fork-Black River Management Area and are excluded from harvest.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of Eagar/Springerville, Alpine, St. Johns, Show Low, Pinetop-Lakeside, and other small towns. Other users include individuals from urban centers such as Tucson and Phoenix. The area is known for its wildlife, fishing, hiking, hunting, and scenery.

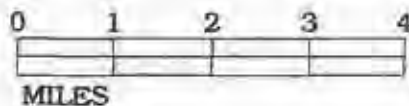
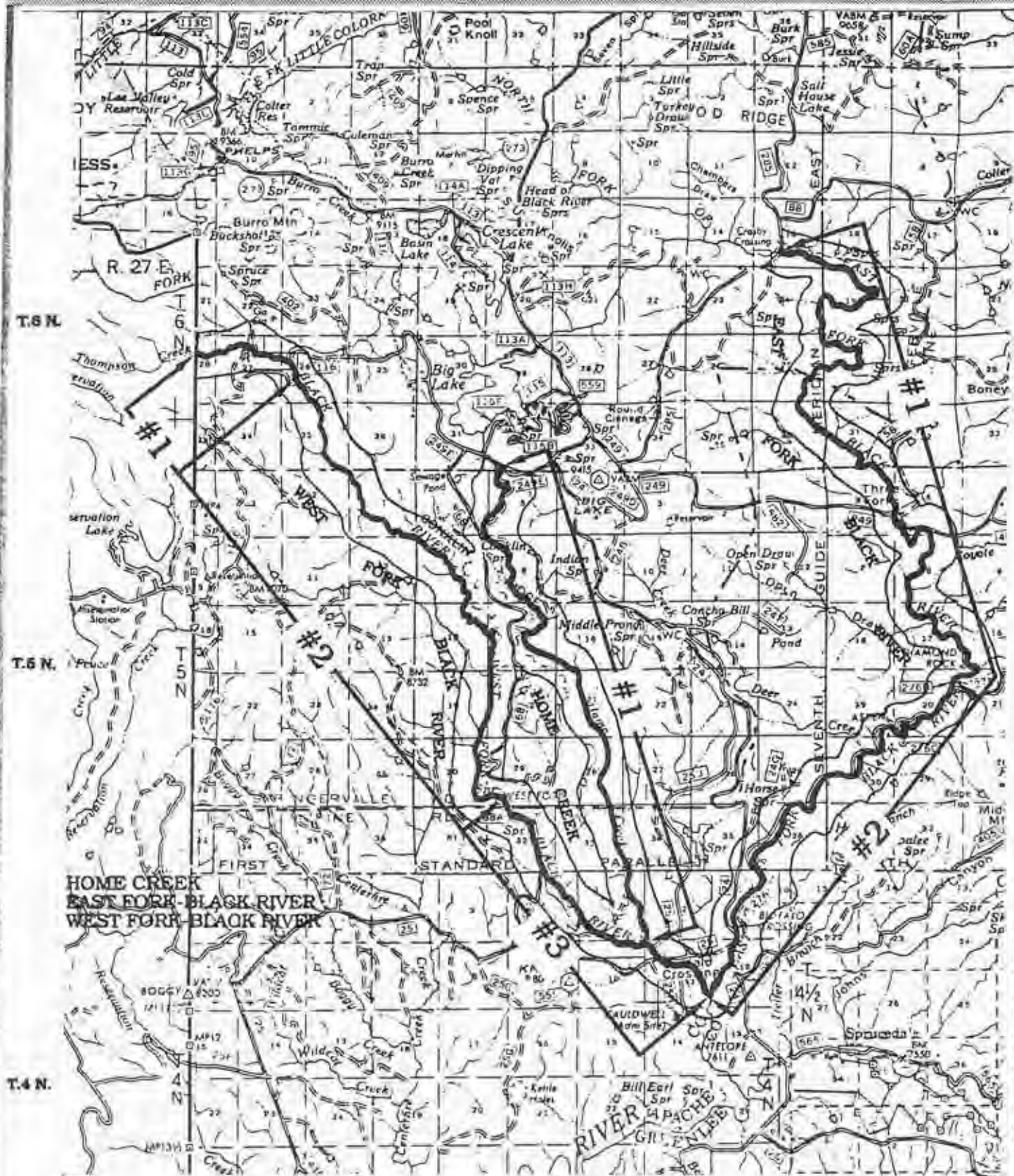
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EAST FORK - BLACK RIVER

EAST FORK BLACK RIVER



EAST FORK - BLACK RIVER

LOCATION

Name: East Fork, Black River County: Apache Forest: Apache-Sitgreaves

The East Fork originates near Big Lake. From its origin, it flows southeast for approximately 13 miles to Diamond Rock Campground, and then flows southwesterly to its confluence with the West Fork of Black River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 20.5 miles of the East Fork from Spence Springs to the confluence with the West Fork were evaluated for potential designation.

Eligible Segments: #1 - Spence Springs to Diamond Rock Campground, 12.8 miles
#2 - Diamond Rock Campground to confluence with West Fork, 7.7 miles

Eligibility: The East Fork is freeflowing with no impoundment or diversion.

The outstandingly remarkable values include: Both Segments: Scenic, Recreational, Fish and Wildlife, Historic

Classification: Segment #1: Scenic
Segment #2: Recreational

Total stream corridor (1/4 mile on each side) includes 6002 acres, of which the Forest Service administers 98 per cent and private land management is 2%.

DESCRIPTION OF RESOURCES AND VALUES

Geology: The geology of this stream is of volcanic origin. Basalt and andesite from the Datil Formation were deposited in large lava flows during the Quaternary-Tertiary periods. Between episodes of volcanic activity, sedimentary deposits were formed, either as crudely stratified sand and gravel deposits, or as breccia, sandstone, gravel and unsorted fragmental units deposited as mudflows.

Streamflow and Water Quality: Water quality data from EPA STORET indicates that the East Fork does meet standards set by Arizona for cold water fisheries, full body contact, domestic water source, fish consumption, and agricultural irrigation and livestock watering.

Water discharge records from the USGS Water Data Report Az-80-1, Water Year 1980, indicates that the average discharge in 1979-80 at USGS Station 09489075 was 102 cfs. The maximum flow was 1690 cfs and the minimum flow was 5.7 cfs.

Vegetation: Segment #1 has the following species composition: 40% bunch grass communities, 2% Douglas fir-white fir communities, 6% mixed grass communities, and 21% pine communities. Segment #2 has the following species composition: 11% Douglas fir-white fir communities and 89% pine communities. Riparian areas include alder and willow associations. TES plants that may be found in the general area include Mogollon clover, Gila groundsel, and Goodding onion.

Fisheries and Wildlife: Fish species that occur in both segments include rainbow and brown trout, desert sucker, and speckled dace. The native indicator species is the speckled dace, while the sportfish indicator species is the brown trout.

Wildlife species known in this area include: northern and lowland leopard frog, northern goshawk, sharp-shinned hawk, green-winged teal, mallard, veery, belted kingfisher, blue grouse, willow flycatcher, bald eagle, turkey, common merganser, flammulated owl, osprey, pine grosbeak, spotted owl, mourning dove, coyote, beaver, spotted bat, bobcat, striped skunk, long-tailed weasel, occult little brown bat, mule deer, raccoon, Abert's squirrel, water shrew, black bear, New Mexican jumping mouse, and Rocky Mountain elk.

Wildlife habitat uniqueness is rated as "unique/rare." Habitat diversity is rated as "high." The quantity and diversity of wildlife is an outstandingly remarkable value.

Known TES species found within 1/2 mile of these segments include: California floater, Three forks springsnail, Chiricahua Leopard frog, narrow-headed garter snake, New Mexican jumping mouse, northern goshawk, spotted bat, Arizona montane vole, White Mountains water penny beetle, and the Mexican spotted owl.

Visual Resources: The visual quality objective for both segments is foreground retention. The high visual quality is an outstandingly remarkable value and has been demonstrated a number of times by professional photographers in various magazines.

Cultural and Historical Resources: Segment #2 has several pre-historic lithic scatters from hunting camps associated with the Mogollon culture from about 1200 AD. These are not readily apparent to the visitor. More apparent are the several historic sites within segment #2 associated with the Civilian Conservation Corps and also with a lodge built in the 1930's near Diamond Rock. The remains of these structures can be seen by the trained observer. A high percentage of "old-timers" also remember these sites and have been a valuable source of information about the structures. Two "Adirondack style" shelters constructed by the CCC's still are in use at Diamond Rock Campground. In fact, the diamond-shaped rock that has provided the namesake for the area was used by cowboys, settlers, and early Forest Rangers to help navigate through the canyon. This historic interest makes this an outstandingly remarkable value.

Air Quality: The air is of high quality most of the time with a slight decrease in quality during dry, hot times due to dust from the access road through Segment #2 (Forest Road 276).

LAND USES AND DEVELOPMENTS

Land Ownership: The river is located in the Apache-Sitgreaves National Forests.
River Corridor Acreage - Segment #1: 3667 acres
- Segment #2: 2335 acres

The only parcel of private land is at Crosby Crossing (40 acres) in Segment #1 and is used for livestock grazing.

Water Rights and Water Resource Developments: Water is used by downstream users such as Salt River Project and the Fort Apache and San Carlos Apaches. There are no existing dams or dikes nor are there any plans to build any structures.

Transportation Facilities: Segment #1 is accessed by means of a bridge across the East Fork at a location known as Three Forks. Forest Road 249 crosses the stream here and is a relatively heavily-used gravel road. Access up and down stream is by foot or horseback. Forest Road 285 accesses Crosby Crossing and crosses the East Fork but is not a heavily-traveled road.

Segment #2 is accessed most of its length by Forest Road 276 and is heavily used by recreationists from May through October. This gravel road parallels the stream and bridges it at two locations, one at Buffalo Crossing and one near Diamond Rock.

Recreation Activities: Segment #1 is used primarily by fishermen and hikers.

Segment #2 is used by campers, hikers, and fishermen and is one of the most intensively used, stream-based recreation areas in the southwest. People come from as far away as California and Texas to camp in this canyon. Most sites are primitive sites located within 150 feet of the stream. Future management will close the sites adjacent to the stream and re-locate them further from the banks. Developed sites occur at Buffalo Crossing and at Diamond Rock. Most campers stay at least 4 or 5 days here. No fees are charged. Segment #1 is in the semi-primitive, motorized recreation opportunity spectrum (ROS) while segment #2 is in the roaded, natural appearing ROS.

Current Special Management Designations: Motorized travel is discouraged in segment #1; ATC's are restricted in Segment #2.

Mining: There are no mining activities in either segment and no evidence of past mining activities.

Special Land Uses: There are no special use permits in either segment.

Livestock Grazing and Agriculture: Cattle are permitted in both segments but will be restricted in Segment #2 in the Fall of 1993 when a new fence is constructed. There are four allotments (i.e. Black River, Upper Campbell Blue, Burro Creek, and Udall) that total 1616 animals. There is one fence across the stream in segment #2 while segment #1 has 5 fence crossings, mostly at the private land at Crosby Crossing. A portion of upper East Fork near Big Lake will be fenced in 1993 to exclude livestock (Mandin Spring project, about 160 acres).

Timber Harvest: Although timber has been harvested in this canyon only on a salvage basis, the land is classified as suitable for harvest. Fuelwood is gathered by campers in segment #2.

Other Activities: None

SOCIAL AND ECONOMIC VALUES

Segment #2 is very valuable to the local economy of Alpine due to its high annual use estimated at about 100,000 recreation visitor days.

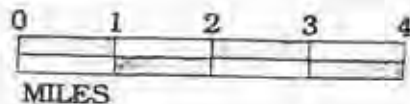
FISH CREEK

FISH CREEK



R.28 E.

R.29 E.



FISH CREEK

LOCATION

Name: Fish Creek County: Greenlee Forest: Apache-Sitgreaves

Fish Creek originates near the Mogollon Rim and Hannagan Meadow. From its origin, it flows northwest for approximately 15 miles to the Black River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 12 miles of Fish Creek from Forest Road 24 to the Black River were evaluated for potential designation.

Eligible Segment: FR 24 to Black River 11.7 miles

Eligibility: Fish Creek is freeflowing with no impoundment or diversion.

The outstandingly remarkable values include:

Entire segment: Fish and Wildlife, Recreation

Classification: Entire segment: Scenic

Total stream corridor (1/4 mile on each side) includes 3677 acres, of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The surficial geology of this stream is of volcanic origin. Basalt and andesite from the Datil formation were deposited in large lava flows during the Quaternary-Tertiary periods. Between episodes of volcanic activity sedimentary deposits were formed, either as crudely stratified sand and gravel deposits, or as breccia, sandstone, gravel and unsorted fragmental units deposited as mudflows.

Streamflow and Water Quality - Water quality data from EPA STORET indicates that Fish Creek does meet standards set by Arizona for cold water fisheries, full body contact, fish consumption, and agricultural irrigation and livestock watering. No discharge information is available but the average flow is estimated to be about 4 cfs.

Vegetation - About 68% of the vegetation is in Douglas fir-white fir communities, 28% in pine communities, and 4% in spruce-alpine fir communities. Riparian vegetation consists of a willow and mixed deciduous association and is 72 acres in size. T/E plant species in or near this creek are: Goodding onion, Blumer's dock, Gila groundsel, and Mogollon clover. Plant species diversity is high and plant structural diversity includes groundcover, low and high shrubs, and high trees. The plant successional stage is secondary and climax.

Fisheries and Wildlife - Fish species that occur in this segment include: Apache and brook trout, desert sucker, and speckled dace. The native indicator species and the sportfish indicator species is the Apache trout. Wildlife species known in this area include: northern leopard frog, northern goshawk, sharp-shinned hawk, band-tailed pigeon, blue grouse, bald eagle, turkey, flammulated owl, osprey, pine grosbeak, spotted owl, coyote, spotted bat, bobcat, long-tailed weasel, occult little brown bat, mule deer, Abert's squirrel, water shrew, black bear, New Mexican jumping mouse, and Rocky Mountain elk.

Wildlife habitat uniqueness is rated as "uncommon." Habitat diversity is rated as high.

Visual Resources - The visual quality objective is foreground retention. Visual quality is good with the meandering creek in a stately canyon bottom.

Cultural and Historical Resources - There are no known pre-historic sites in the canyon but there is evidence of historic use by hunters and cowboys, namely trash dumps.

Air Quality - Air quality is of high standard.

LAND USES AND DEVELOPMENTS

Land Ownership: The river is located in the Apache-Sitgreaves National Forests. No private land exists within this segment. Fish Creek corridor is 3677 acres.

Water Rights and Water Resource Developments: There is no dam or dike on this stream nor are any planned. The water is used by downstream users such as Salt River Project and the Fort Apache and San Carlos Apaches.

Transportation Facilities: The upper end of this segment is accessed by Forest Road 24, a gravel road with light use. The remainder of the creek is accessed by a non-motorized trail which parallels Fish Creek.

Recreation Activities: This canyon is a favorite hike for backcountry enthusiasts and fishermen. Although only about 500 recreation visitor days are estimated annually, the high quality of the canyon experience provides an outstandingly remarkable value.

Current Special Management Designations: This canyon is managed as a non-motorized experience.

Mining: There are no mining claims or activities in this canyon and no evidence of mining activities in the past. These lands are not withdrawn from mineral entry but opportunity for mineral activity is considered minimal due to a lack of mineralization in this area.

Special Land Uses: There are no special use permit facilities in Fish Creek. Outfitter and guide operations for hunting and fishing are allowed and have been conducted in the canyon.

Livestock Grazing and Agriculture: Fish Creek is grazed under two allotments: Fish Creek at 250 animals and Sprucedale-Reno at 200 animals. Four fences cross the stream and there is one small corral.

Timber Harvest: The lands in the canyon are classified as suitable and available but have been deferred from harvest.

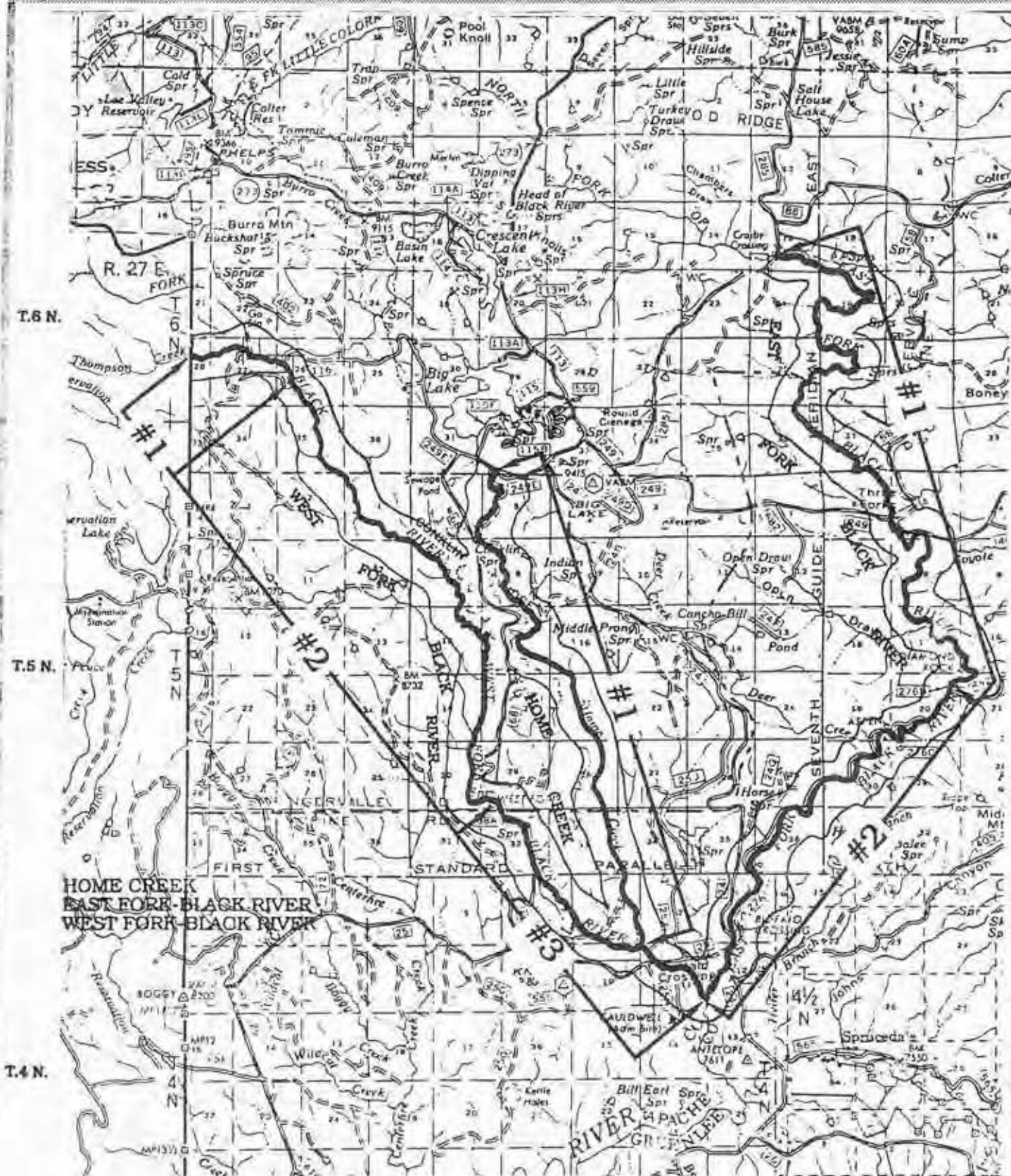
Other Activities: None

SOCIAL AND ECONOMIC VALUES

The majority of the users are not local people but rather visitors from other metropolitan areas. It is anticipated that the economic value of use in this canyon will increase.

HOME CREEK

HOME CREEK



HOME CREEK

LOCATION

Home Creek - Apache County, Apache-Sitgreaves National Forests.

Home Creek originates just south of the Big Lake Recreation Area. It flows south for approximately 10 miles where it joins the West Fork Black River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 10 miles of Home Creek were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments

Segment 1 - Home Creek
10.0 miles
from headwater (Section 32, T6N, R28E) to
West Fork Black River (Section 10, T4N, R28E)

Eligibility

Segment 1 is free flowing and without impoundments or diversions.

The outstandingly remarkable values include: fish, historic.

Home Creek flows from a rolling grassland area near the junction of FR 68 and FR 249E. It supports a population of Apache trout where water flows year around or collects in pools. The PS Ranch, which is on state land, is near the confluence of Home Creek and the West Fork Black River.

Classification: Scenic

The total river corridor (1/4 mile on each side) includes approximately 3,200 acres of which the National Forest administers approximately 99%.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Volcanism has controlled the development of the present day landscape in the areas of the proposed wild and scenic rivers. Mt. Baldy rises above the surrounding lava plateau about 2200 feet. It is composed mainly of leucite. Two distinct lava flows occurred approximately 10 and 8.6 million years ago separated by the Sheeps Crossing Formation. The Sheeps Crossing Formation consists of patches of sediments found commonly near the mouths of the larger valleys. The deposit has been eroded and may only exist in areas protected by overlying basalt. It was formed from volcanic debris and pieces of solidified lava set in motion by either explosions or precipitation. The debris travelled down drainages quickly, picked up large boulders and formed large colluvial fans. Two distinct members are found in this formation. The lower member of the formation appears as breccia, sandstone, gravel, airfall tephra, and abundant unsorted fragmental units deposited by mudflows. The upper member is characterized by the crudely stratified, poorly sorted sand and gravel, as seen near the old railroad grade near Thompson Ranch along Burro Creek. (Merrill, 1984).

Surrounding Mt. Baldy, large areas of basalt flow away from the the lava cone. Basalt of this age overlies the early volcanic rocks and the Mt. Baldy volcanic rocks. Younger basaltic rocks occur as cinders, agglomerate, intrusive and extrusive rocks. The maximum thickness of basalt exposed in the valley of the Little Colorado River north of Greer is greater than 150 meters. Local accumulations of cinders in some of the more than 170 cinder cones may exceed 200 meters in height (Merrill 1984).

At least 4 times in the last 200,000 years, glaciers have formed in the upper valleys of the Little Colorado and Black rivers. These have produced cirques, side-glacial channels, U-shaped valleys, and have left well-formed moraines and scattered gravel deposits to mark their former positions (Pewe, 1984). These can be recognized above Sheeps Crossing and Lee Valley Reservoir along the East and West Forks of the Little Colorado River and along the upper Black River drainage.

Streamflow and Water Quality - Streamflow: Perennial, with intermittent reaches. No data available to estimate median or duration of flows. Water Quality: No data is available.

Vegetation - TES Species: Allium goodingii (Gooding onion)

The landscape surrounding this area is dominated by mixed conifer (Douglas-fir, white fir, and spruce) at the higher elevations and ponderosa pine at the lower elevations. The channel consists of alpine meadows, mixed conifer, ponderosa pine, aspen, and willow.

Fisheries and Wildlife -

TES Species:

Accipiter gentilis (Northern goshawk)
Pandion haliaetus (osprey)
Oncorhynchus apache (Apache trout)
Haliaetus leucocephalus (bald eagle)

The great variety of habitat types provides for diversity and abundance of wildlife species. Home Creek supports native Apache trout and numerous nesting areas for raptors. Bald eagles migrate to the area in the winter.

Visual Resources - The diversity of plants and wildlife create an enjoyable view for hikers, fishermen, and bicyclists who use the area. Alpine meadows and stands of spruce and Douglas-fir provide cool temperatures for hiking and camping. Where Home Creek meets the West Fork Black River, the canyon opens up to a large meadow which is heavily used by elk and deer.

Cultural and Historical Resources - Approximately half of Home Creek has been inventoried for cultural resources. A few lithic scatters have been recorded for the area. The PS Ranch at the confluence of Home Creek and the West Fork Black River was privately owned until a recent land purchase by the State of Arizona. It consists of a cabin and corrals.

Air Quality - No data available.

LAND USES AND DEVELOPMENTS

Land Ownership - Home Creek is located in the Apache-Sitgreaves National Forests. Segment 1 is 10 miles and 3,200 acres. Approximately 14 acres is owned by the State of Arizona (Section 10, T4N, R28E).

Water Rights and Water Resource Development - The creek is free of diversions and impoundments.

Transportation Facilities - Vehicle access is from FR 68, FR 24, and various small logging roads. The Indian Springs Trail #627 is located on the north end of the segment where it crosses just above Conklin Spring.

Recreation Activities - A variety of recreation activities occur along portions of the creek. The Indian Springs Trail #627 and West Fork Trail #628 are hiking and bicycling trails which are heavily used June through August. Horse stables at the headwaters of the creek provide for horseback riding in the summer and hunting trips in the fall. An undeveloped camping area is located at Conklin Spring and is used as an overflow camping area for the Big Lake Recreation Area. Camping occurs along Conklin Ridge in clusters and hiking into the Home Creek area by these campers is common. The lower portion of Home Creek is used occasionally by anglers who are fishing along the West Fork Black River.

Current Special Management Designations - Approximately 1/2 mile from the junction of the West Fork Black River north falls within the West Fork Black River Management Area (Sec. 3, T4N, R28E).

Mining - There are no known oil or gas leases, no developed geothermal sites, no active mining operations or quarries in this segment.

Special Land Uses - Section 31, T6N, R28E, Section 6, T5N, R28E - Springerville Ranger District - Sewage and Water Treatment Facility

Livestock Grazing and Agriculture - The segment of Home Creek managed on the National Forest is open to grazing. It falls into the Burro Creek Allotment on the Springerville Ranger District and the PS Allotment on the Alpine Ranger District.

Timber Harvest - The area is identified as suitable for harvest except for the portion that falls in the West Fork Recreation Area. The lower 3/4 of the segment currently falls in the Conklin Multi-product Sale which is under contract. One stand that borders Home Creek has been harvested along with five other stands which fall in the 1/4 mile corridor. All other stands along the creek were excluded from harvest.

SOCIAL AND ECONOMIC VALUES

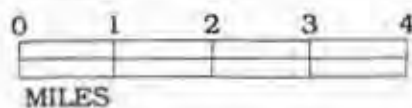
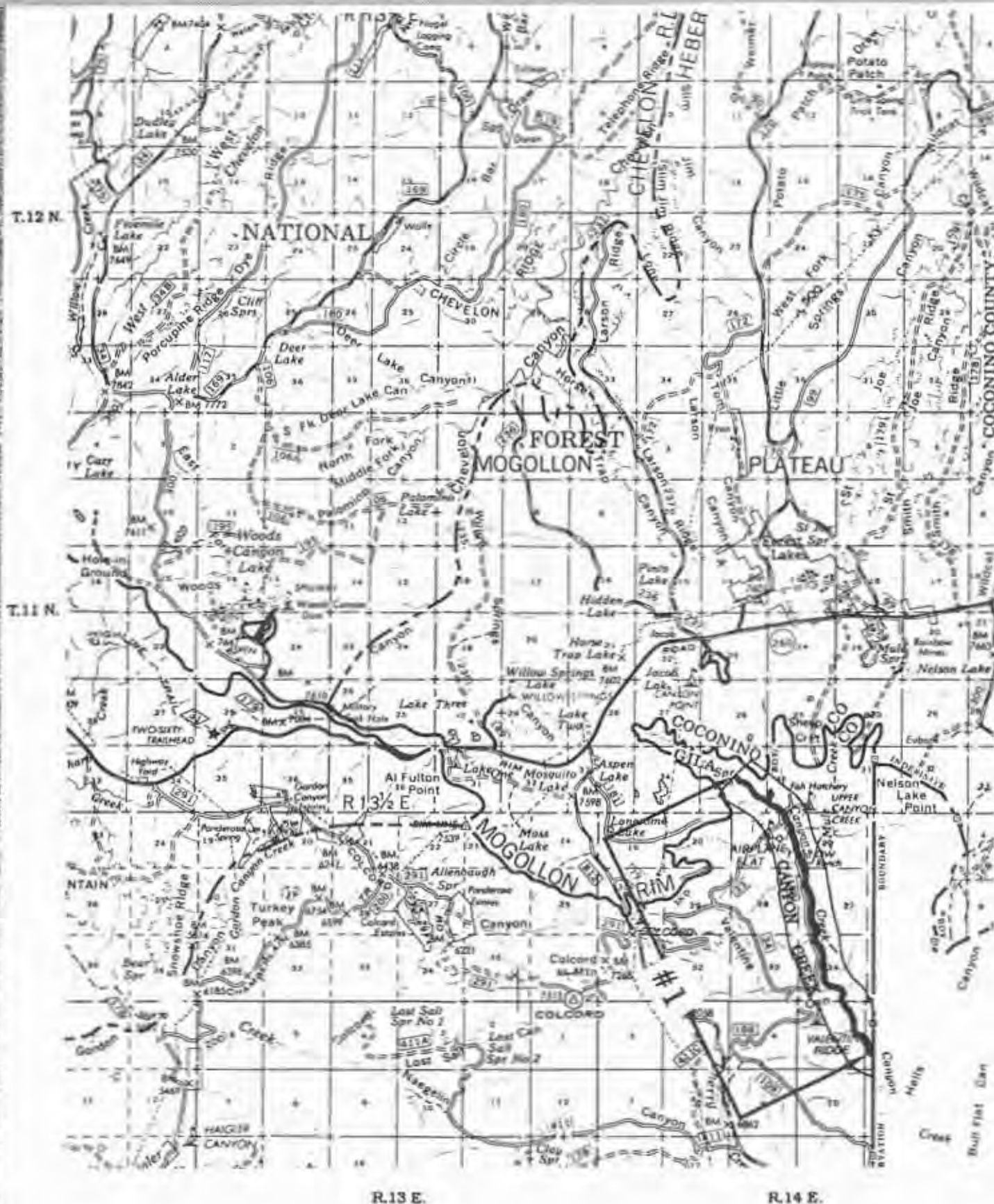
The local users are from the communities of Eagar/Springerville, Alpine, St. Johns, Show Low, Pinetop-Lakeside, and other small towns. Other users include individuals from Tucson and Phoenix.

References

- Merrill, Robert K. "Development of the Landscape in East-Central Arizona". in Smiley et. al. ed., Landscapes of Arizona. University Press of America, Lanham, Md. pp. 137-173.
- Fewe, Troy L., Robert K. Merrill, and Randall G. Updike. "Glaciation in the San Francisco Peaks and the White Mountains". in Smiley et. al. ed., Landscapes of Arizona. University Press of America, Lanham, Md. pp. 327-357.

CANYON CREEK

CANYON CREEK



CANYON CREEK

LOCATION

Located in Gila County (Congressional District 6), partially within the Tonto National Forest, Canyon Creek's headwaters are above the Mogollon Rim near State Highway 260 approximately 30 miles east of Payson, Arizona. It flows southerly for 7.4 miles through the Tonto National Forest, and then 25 miles through the Fort Apache Indian Reservation until it flows into the Upper Salt River. The potential River Area begins at Canyon Creek Springs and continues to the boundary of the Indian Reservation. It is managed as "Blue Ribbon" fishery, and is a very popular recreation area during the cool summer months.

Total Stream Length: 32.4 miles

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segment Found Potentially Eligible for Designation:

Approximately 5.4 miles of stream are evaluated for this resource report.

Total acres in potential River Area: 1,580 acres

Percent administered by Forest Service: 97 %

Note: Only the portion of this stream within National Forests was evaluated, since the Forest Service has no jurisdiction on Indian Reservations.

Townships	10 N	Range	15 E	Sections	2, 3
	10 N		15 E		21, 22, 27, 28, 34
	11 N		14 E		35, 36

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Wildlife
Ecological

D. Classification:

Recreational

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The potential River Area is located just below the Mogollon Rim, at the boundary between the Transition Zone and Colorado Plateau Provinces of Arizona. The area is characterized by metamorphic and sedimentary rocks ranging in age from the Precambrian Apache Group to the Pennsylvanian Naco formation. The canyon offers excellent exposure and record of these geological units, not ordinarily available in other areas of the region.

B. Streamflow and Water Quality:

Streamflow is perennial. Median flow is estimated to be approximately 8.0 cfs.

Water quality data from Arizona Department of Environmental Quality indicates that Arizona water quality standards are generally met. Violations of standards for ammonia and mercury have been recorded below the Arizona Game and Fish Canyon Creek Fish Hatchery within the potential River Area. Occasional violations of soluble solids, phosphate, and total dissolved solids have also been recorded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates this segment is in non-support of its designated water quality standards, identified as: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Domestic Water Source, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation:

Canyon Creek is a narrowleaf cottonwood-willow community type, described by Brown (1982) as the Narrowleaf Cottonwood-willow Association. This community type is common on the Tonto National Forest, and is associated with headwaters along the Mogollon Rim.

Tree species diversity is low, being limited primarily to narrowleaf cottonwood, ponderosa pine and alder. Tree canopy is sparse, at about 10-20%. Shrubs dominate the vegetative aspect, with a canopy cover of about 50-75%. Bonpland willow and red willow are the dominant species. The herbaceous component is luxuriant, with a great variety of wetland grasses, sedges, rushes, and forbs. Lands adjoining the stream comprise a well-drained meadow.

The moderately confined channel was severely scoured during the 1980's, prompting the Forest Service, the Arizona Game and Fish Department, and sportsmens clubs to jointly complete channel stabilization work. This included channel stability structures, planting of willows, and fencing to exclude livestock. Good vegetative recovery occurred as a response. The flooding of the winter of 92/93 caused some channel damage, but natural recovery is expected to occur in 2-3 years.

Canyon Creek has been identified as having outstandingly remarkable ecological values. Habitat composition within the potential River Area includes, or is suitable for, the plant species blumer's dock, is a candidate species on the U.S. Fish and Wildlife Service threatened and endangered species list and is a designated Forest Service sensitive species. Additionally, the habitat supports a wide variety of fish species, including the Colorado squawfish and razorback sucker.

D. Fish and Wildlife:

Fisheries: A coldwater fishery, Canyon Creek supports four native fish species and is a major brown and rainbow trout fisheries on the Tonto National Forest. Managed as a "Blue Ribbon" fishery (as designated by Arizona Game and Fish Department), it provides the public with unique flyfishing opportunities that only allows use of artificial flies and lures. Other species which occur within the stream are: desert sucker, Colorado squawfish, speckled dace, and razorback sucker. The Colorado squawfish and razorback sucker were stocked in Canyon Creek in 1988. The site is surveyed yearly and the last recorded recapture was five months after stocking in 1989, indicating that they are probably not present at this time.

A major habitat improvement project was completed in the late 1980's. The project included instream fish habitat structures, the construction of a riparian fence that excluded cattle access from most of the stream, and the planting of riparian vegetation. The results have been excellent. During severe flood events, the fish habitat within the treated sections of stream has actually improved in quality. According to Arizona Game and Fish Department, trout density increased four fold as a result of the habitat improvement project.

The Colorado Squawfish and the Razorback Sucker are listed as endangered on both the U.S. Fish and Wildlife Service and the state of Arizona's threatened and endangered species list.

Wildlife: Game species known to occur within the potential River Area include deer, elk, bear, quail, wild turkey, and tree squirrels.

Canyon Creek has been identified as having outstandingly remarkable wildlife value. The potential River Area provides good riparian habitat for a variety of threatened and endangered wildlife species which occur along Canyon Creek, and may include;

U.S. Fish and Wildlife Service Threatened and Endangered species:

Thick-billed parrot	- Endangered
Mexican spotted owl	- Threatened
Southwestern willow flycatcher	- Proposed endangered
Arizona southwestern toad	- Candidate
Narrowheaded garter snake	- Candidate
Spotted bat	- Candidate
Occult little brown bat	- Candidate

Arizona State Threatened and Endangered species:

Northern leopard frog	- Candidate
Chiricahua leopard frog	- Candidate
Northern goshawk	- Candidate
Common black-hawk	- Candidate
Western red bat	- Candidate

Forest Service sensitive species: Belted kingfisher, and the flammulated owl.

E. Visual Resources:

Visual Quality Objective: Retention
Character Type: Tonto
Character Subtype: Upper Tonto
Variety Class: A-Distinctive

This perennial stream meanders down the center of a gentle canyon. The canyon walls are forested with Ponderosa Pine, while the broad canyon bottom is covered in lush green grasses, seasonal wildflowers and willow trees, giving the appearance of an alpine mountain meadow usually found at higher elevations. Wooden split-rail fencing has been constructed to enhance the beauty of the area.

F. Cultural and Historical:

There are seven known sites (AR-03-12-05-246, -486, -515, -475, -476, -516, -487) within the potential River Area (none on the National Register) which suggest an occupation from AD 1000 to the 1930's. The prehistoric sites consist of artifact scatters associated with small masonry structures. Historic occupation consists of several cabin sites and related features dating from the 1880's to the 1930's.

LAND USES AND DEVELOPMENTS

A. Land: Canyon Creek potential River Area is 5.4 miles in length, containing 1,580 acres and one parcel of private land.

1,533 acres (97%) National Forest
47 acres (3%) private land: sec. 22, T. 10.5 N., R. 15 E.

There are no land withdrawals within the potential River Area.

B. Water Rights and Water Resource Developments: Three diversions exist on the National Forest within the potential River Area. The Arizona Game and Fish Canyon Creek Fish Hatchery diverts an average of 5.5 cfs from the springs that sustain base flow in Canyon Creek at the upper end of the study segment. These diversions can reduce flow substantially from the point of diversion to the point where return flows reenter the creek (a distance of about 0.5 miles). A second diversion, the O.W. Ranch Ditch, diverts flow below the point where return flows from the hatchery enter the creek. The maximum irrigation demand rate calculated by Arizona Department of Water Resources for lands irrigated by the ditch is 1.2 cfs. Diversion capacity of the ditch is 13.2 cfs. Diversions by this ditch can have a moderate effect on flows within the study segment. A third diversion, the O.W. West ditch is used periodically to irrigate about 50 acres of native pasture on the National Forest. This ditch has little effect on flows in the potential River Area. Although the diversions can have significant effects on flows in the potential River Area, the diversion structures themselves have little impact on the free-flowing character of the reach.

C. Transportation Facilities: This recreational area is very popular during the cool summer months. Easy access is provided by Forest Development Road #188 along nearly the whole length of the lower portion of the creek and fords the creek with a wooden bridge. Forest Development Road #33 provides access to the upper end of the creek and has a concrete ford. The area north of the State Fish Hatchery is accessible by Forest Development Road #3172 for official business under a special permit. All of these roads are natural surface, but are maintained so that a prudent driver can negotiate them with a passenger car. A number of remnant, closed roads border the proposed area.

D. Recreation Activities and Facilities:

Developed recreation sites within or adjacent to the proposed River Area are Upper Canyon Creek Recreation Site (305 PAOT*) and Airplane Flat Recreation Site (300 PAOT*). The Canyon Creek Fish Hatchery (Arizona Game and Fish Department) is also within the potential River Area. An estimated 20,000 recreation visitor days (RVD'S) occur within the potential River Area. Dispersed recreation activities include cross-country hiking (there are no system trails within the River Area), picnicking, camping, fishing, mountain bicycling, viewing of scenery and wildlife, and visiting the hatchery facilities. Commercial activity includes outfitter/guide services associated with fishing.

*PAOT - Capacity of developed recreation sites expressed as 'people at one time'

E. Special Management Designations: None occur within the potential River Area.

P. Mining: There are no acres of potential River Area withdrawn from mineral entry. All acreage remains open to mineral entry.

There is one existing mining claim which has been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the area. The potential River Area is located within a zone identified as exhibiting low probability for economic petroleum reserves. Two thermal wells are located within a three mile radius of the northern boundary, but geochemical evidence does not substantiate geothermal resources in the region. There are no active mining operations or quarries within the potential River Area. The area has few or no known mineral deposits, although geologic terrane exhibits conditions favorable for occurrences of gold and silver.

G. Special Uses:

Special Use Permits issued within the potential River Area are:

Arizona Game and Fish - Canyon Creek Fish Hatchery
Gila County - Road maintenance agreement

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential River Area. Canyon Creek has one allotment and the Heber-Reno Sheep Driveway within the potential River Area. Approximately six miles of fence and watertap improvements are within the potential River Area.

Heber-Reno Sheep Driveway has 4,000 sheep which utilize the driveway for approximately one day each year.

OW Allotment has 675 authorized AUM's. Approximately 30% of the allotment is within the potential River Area, which would equate to 203 AUM's of grazing annually.

I. Timber: All 1,533 acres within the potential River Area are suitable for timber harvest per Tonto National Forest Land and Resource Management Plan. Presently there are no sales under transaction and no sales are planned within the next five-year period. Approximate volume per acre available for future harvest would be 4,000 board feet (a total of 6,300,000 board feet within the potential River Area per 20 year entry cycle).

There is no fuelwood harvesting at the present time and none is expected in the near future.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

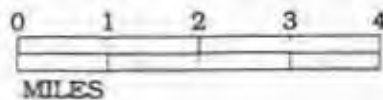
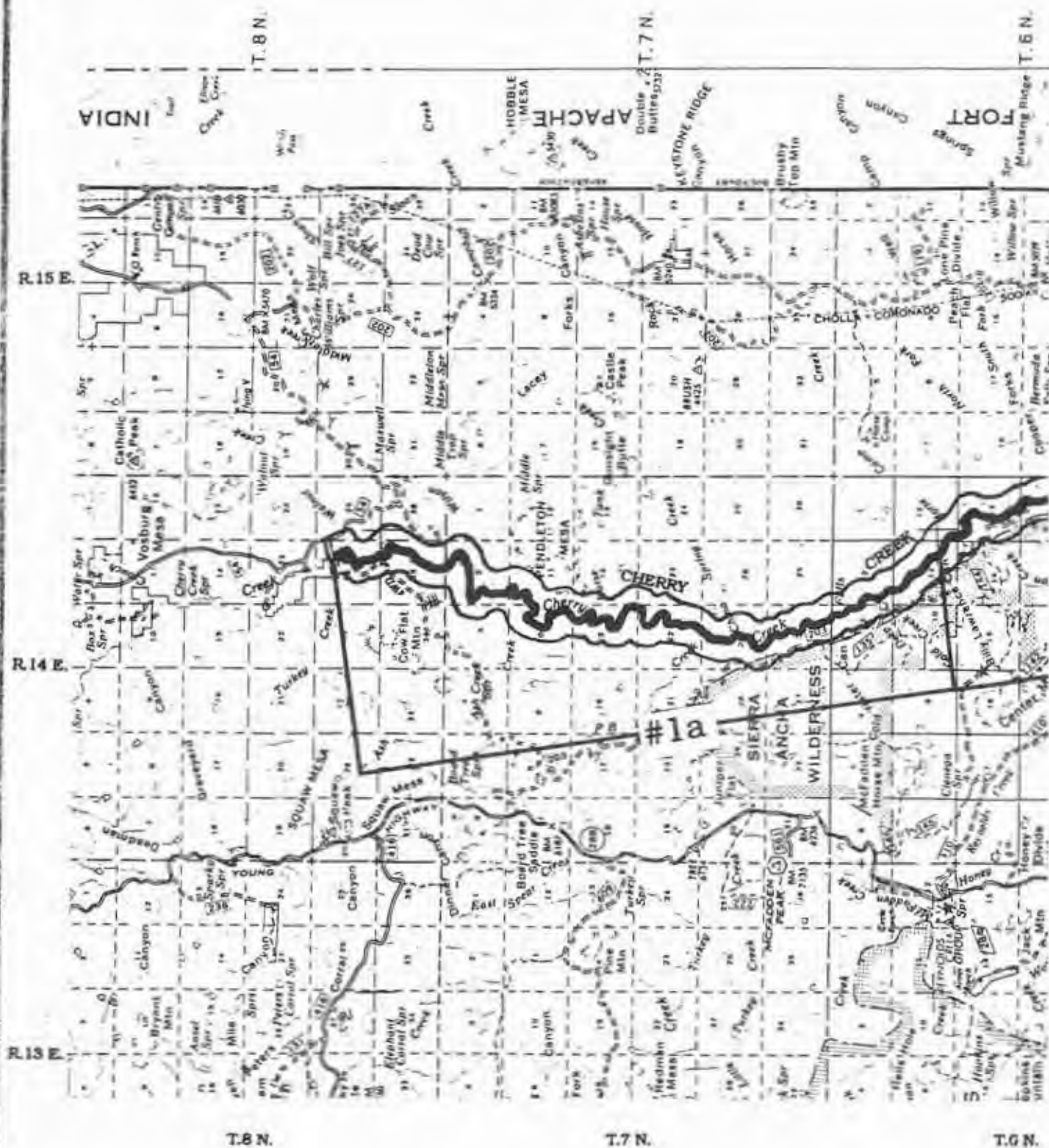
Recreational users derive social benefits from the opportunities for fishing, relaxation, viewing of scenery, and wildlife in an area with preserved unique, natural conditions, while the livestock permittee and the local land owner derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$11.45 per recreation visitor day. An estimated visitation of 20,000 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$229,000.00 per annum.

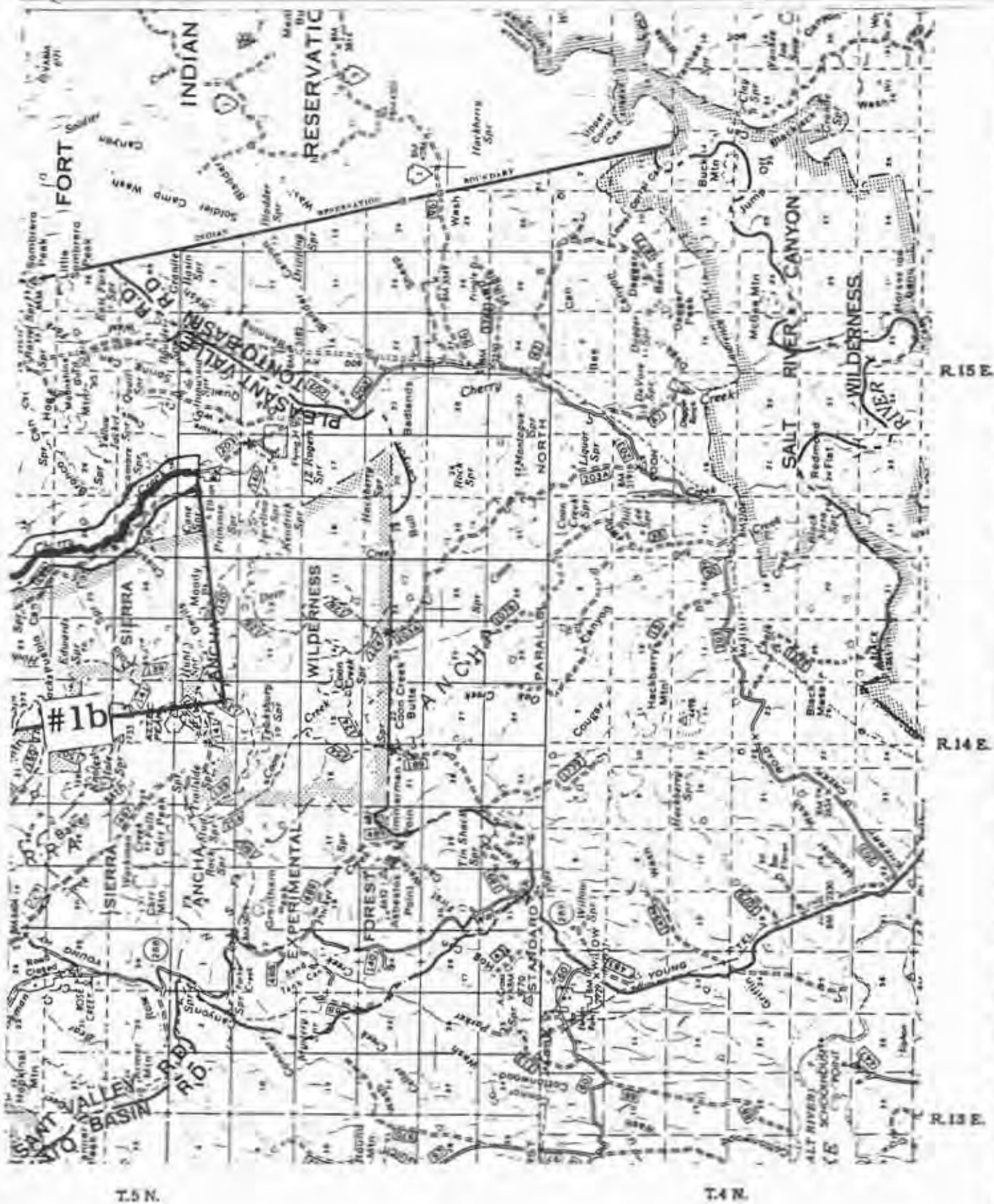
Allotment fees for 1993 are \$1.66 per animal unit month for a total of 203 animal unit months, occurring on the allotments within the potential River Area, resulting in \$337.58 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been mined and marketed from the potential River Area. There are 6,300,000 board feet per 20 year entry cycle of harvestable timber within the potential River Area. The approximate value per annum would be \$126,000.00.

CHERRY CREEK

CHERRY CREEK



CHERRY CREEK



CHERRY CREEK - SEGMENT #1-a

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Cherry Creek is a narrow, steep canyon just north and east of the Sierra Ancha Wilderness approximately 40 miles north of Globe, AZ. Its headwaters are on the Mogollon Rim, and it flows south to the upper Salt River. Spectacular scenery is provided by some sections of the stream.

Total River Length: 51.7 miles

Segment 1-a - 14.3 miles Extends from Forest Development Road #329 to Billy Lawrence Creek.

Segment 1-b - 6.4 miles Begins at Billy Lawrence Creek and continues to north property boundary of the Ellison Ranch.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Cherry Creek Segment #1-b, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 14.3 miles of stream were found potentially eligible for designation.

Total acres in potential River Area, Segment 1-a: 3,990 acres

Percent administered by Forest Service: 100%

Township	6 N	Range	14 E	Sections	2, 3, 10, 11
	7 N		14 E		1, 2, 3, 10,
					14, 15, 22, 23, 27, 34, 35
	8 N		14 E		25, 26, 33, 36

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Fish
Wildlife

D. Classification:

Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Cherry Creek is located south of the Mogollon Rim in the Transition Zone between the Colorado Plateau and the Basin & Range Provinces of Arizona. The region is underlain by igneous and sedimentary rock of Proterozoic age, gravel and tuff of Tertiary age and Quaternary talus, alluvium and terrace deposits. The Cherry Creek monocline parallels the course of Cherry Creek, deformation and downcutting providing excellent exposure of Mescal Limestone, Dripping Spring Quartzite, and Ruin Granites. Deeply dissected canyons and sheer cliffs characterize Cherry Creek, elevations of the adjacent Sierra Ancha range descending steeply to altitudes of 3,000 to 4,000 feet along Cherry Creek.

B. Streamflow and Water Quality: Cherry Creek is mostly perennial in this segment of the potential River Area. Median flow is estimated to be approximately 5 cfs.

Water quality data from Arizona Department of Environmental Quality, Arizona Game and Fish Department, and the Forest Service indicates that Arizona water quality standards are met except for occasional turbidity violations during snowmelt or storm runoff. Water quality sampling in 1987-88 and in 1991 met all applicable standards.

As required by Arizona Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates Cherry Creek fully supports its designated uses. Applicable water quality standards include: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: The Cherry Creek is a sycamore dominated riparian community, described by Brown (1982) as the Sycamore Association. It is sparsely forested, with sycamore, cottonwood, Goodding willow, and alder most common. This is a common riparian community on the Tonto National Forest.

Poor upstream watershed conditions, confining valley walls, and several major flood events have resulted in a badly scoured channel and reduced tree cover. Riparian vegetation is in poor condition. Grazing practices have not been conducive to riparian recovery. Potential riparian community is sycamore-mixed broadleaf with greater tree species diversity and canopy cover.

Hohokam agave, Tonto Basin agave, and the Apache buckwheat are known to occur within the potential River Area and are designated Forest Service sensitive species.

D. Fish and Wildlife:

Fisheries: Cherry Creek supports three native species and has populations of longfin dace, Sonora sucker, red shiner, yellow bullhead, green sunfish, smallmouth bass, rainbow trout, desert sucker, brown trout, speckled dace, and Gila roundtail chub. The habitat quality varies throughout the creek, but is above-average in many places.

The fisheries in Cherry Creek have been identified as having outstandingly remarkable values due to the fact that the stream has been known to contain a stable population of Gila roundtail chub for many years. Presently the Gila roundtail chub is a candidate species on the U.S. Fish and Wildlife threatened and endangered species list, but it is expected to be designated as threatened or endangered within the next five to ten years. In addition, the U.S. Fish and Wildlife Service has proposed Cherry Creek as critical habitat for the endangered razorback sucker.

Wildlife: Game species known to occur within the potential River Area include deer, bear, doves, band-tailed pigeon, quail, and collard peccary.

Segment #1-a has been identified as having outstandingly remarkable wildlife value because the potential River Area contains two Endangered and one Threatened species, and also because it provides fair to excellent riparian habitat for a variety of species. Special wildlife species occurring along Cherry Creek may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate
Mexican garter snake	- Endangered
Narrow-headed garter snake	- Candidate
Arizona southwestern toad	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
Common black-hawk	- Candidate
Western red bat	- Candidate

Forest Service sensitive species: Coati, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Restoration
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	A-Distinctive

Cherry Creek Segment 1-a has been identified as having outstandingly remarkable scenic value. Segments of the creek are located in a canyon which is in a larger canyon. A road parallels the stream, on top of the first canyon bench, but not visible to the creek users because of this interesting land form. Nice side canyons with lush riparian vegetation intersect Cherry Creek on the southern end. The adjacent spectacular Sierra Ancha mountain range has upturned edges of limestone, sharp angular peaks, and steep canyons. Pinyon-juniper woodlands predominate on the canyon slopes, while mixed conifer may suddenly be encountered around a corner on a north slope.

F. Cultural and Historical: There are six known sites (AR-03-12-05-52,-53,-56,-57,-315) within the potential River Area (none are on the National Register). Available site data suggests a prehistoric occupation by the Ancha Mogollon between AD 1200 - 1350. Known sites consist of multiroom masonry pueblos.

LAND USES AND DEVELOPMENTS

A. Land: Segment 1-a of the potential River Area is 14.3 miles in length, and contains approximately 3,990 acres of National Forest System land. No parcels of private land are located within the potential River Area.

There are no land withdrawals within the potential River Area.

B. Water Rights and Water Resource Developments: Minor diversions occur for irrigation of small tracts of private lands some miles upstream of the potential River Area. The effect of these diversions on flow in the potential River Area is small and effect on the free-flowing character is negligible.

C. Transportation Facilities: On the northern border of Cherry Creek Segment 1-a, Forest Development Road #329 provides limited access to the creek; it crosses the creek with an unimproved ford forming the northern border of the potential River Area. Forest Development Road #203 parallels (and forms the boundary of) Segment 1-a for approximately four miles; it is a natural surface four-wheel-drive road. There are a few other dirt tracks that vehicles may be driving on at the present time, however none are scheduled to be left open.

D. Recreation Activities and Facilities: No developed recreation sites or facilities are located within Segment 1-a. Dispersed recreation activities include cross-country hiking (there are no system trails within the River Area), backpacking, hunting, fishing, and viewing of scenery and wildlife. The area is very remote with limited access from Forest roads. An estimated 800 recreation visitor days (RVD's) occur annually within the potential River Area. Commercial activity would be outfitter/guide hunting and fishing-related services.

E. Special Management Designations: Sierra Ancha Wilderness - 20,850 acres. The Sierra Ancha Wilderness was first designated a Wild Area in 1951 and received Wilderness designation by law in 1964. While not large in acres, this is a very special wilderness which includes precipitous box canyons, high vertical cliffs, and pine covered mesas. Its eastern boundary runs parallel to Cherry Creek for about four miles. Approximately 2% of this segment of the potential River Area would be within the Wilderness.

F. Mining: All acreage of potential River Area remains open to mineral entry except for the 2% of area which is within designated Wilderness.

There are approximately 75 existing mining claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. Segment 1-a is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations or quarries. The potential River Area crosses through portions of the Sierra Ancha Mineral District with numerous known mineral deposits and geologically favorable conditions for occurrences of uranium, copper, and silver. Production of copper and silver occurred in the Mineral District during the period of 1917 to 1965, and uranium during the period of 1953 to 1960. Segment 1-a extends through known asbestos localities, however these exhibit low resource potential. The segment extends through geologic terrane which is favorable for occurrence of gold, but no deposits have ever been discovered.

G. Special Uses: None, except for Forest-wide outfitter/guide services.

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment 1-a of the potential River Area, but it has three grazing allotments established within it. They have approximately 1.5 miles of fence and watergap improvements within the Segment.

Cherry Creek Allotment has 5,092 authorized animal unit months (AUM's). Approximately 91% of the allotment is within the potential River Area, which would equate to 458 AUM's of grazing annually.

Center Mountain Allotment has 825 authorized AUM's. Approximately 61% of the allotment is within the potential River Area, which would equate to 50 AUM's of grazing annually.

Flying V/Flying H Allotment has 8,800 authorized AUM's. Approximately 0.31% of the allotment is within the potential River Area, which would equate to 79 AUM's of grazing annually.

I. Timber: None of the 3,990 acres are suitable for timber harvest. The area has very limited fuelwood use, but it is open (by permit) for personal fuelwood gathering for dead and down wood, and dead standing juniper.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the three livestock permittees, prospectors, and a local land owner derive social benefits from a way of life associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$11.78 per recreation visitor day. An estimated visitation of 800 recreation visitor days occurred within this segment of the potential River Area resulting in a total economic value of \$9,424.00 per annum.

Allotment fees are \$1.86 per animal unit month for a total of 587 animal unit months, occurring on the allotments within the potential River Area, resulting in \$1,092.00 per annum in fees being collected by the government. There is no suitable timber for harvest within Segment 1-a of the potential River Area, and consequently no economic benefit or revenue collected.

CHERRY CREEK - SEGMENT #1-b

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Cherry Creek is a long canyon east of the Sierra Ancha Wilderness approximately 40 miles north of Globe, AZ. Spectacular scenery is provided by some sections of the stream. The stream and surrounding watershed support diverse populations of wildlife and fish.

Total River Length: 51.7 miles

Segment 1-a - 14.3 miles Extends from Forest Development Road #329 to Billy Lawrence Creek.
Segment 1-b - 6.4 miles Begins at Billy Lawrence Creek to the north boundary of the Ellison Ranch.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Cherry Creek Segment #1-a, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 6.4 miles of stream were found potentially eligible for designation.

Total acres in potential River Area, Segment 1-b: 1,920 acres

Percent administered by Forest Service: 100 %

Township	5 N	Range	15 E	Sections	5
	6 N		14 E		11, 12, 13, 14, 24, 25, 36
	6 N		15 E		19, 30, 31, 32

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Fish
Wildlife

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Cherry Creek is located south of the Mogollon Rim in the Transition Zone between the Colorado Plateau and the Basin & Range Provinces of Arizona. The region is underlain by igneous and sedimentary rocks of Proterozoic age, gravel and tuff of Tertiary age and Quaternary talus, alluvium and terrace deposits. The Cherry Creek monocline parallels the course of Cherry Creek, deformation and downcutting providing excellent exposure of Mescal Limestone, Dripping Spring Quartzite, and Ruin Granites. Deeply dissected canyons and sheer cliffs characterize Cherry Creek, elevations of the adjacent Sierra Ancha range descending steeply to altitudes of 3,000 to 4,000 feet along Cherry Creek.

B. Streamflow and Water Quality: Cherry Creek is mostly perennial in this segment of the potential River Area. Median flow is estimated to be approximately 9.3 cfs (U.S. Geologic Survey gaging station).

Water quality data from Arizona Department of Environmental Quality, Arizona Game and Fish Department, and the Forest Service indicates that Arizona water quality standards are met except for occasional turbidity violations during snowmelt or storm runoff. Water quality sampling in 1987-88 and in 1991 met all applicable standards.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates Cherry Creek fully supports its designated uses. Applicable water quality standards include: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: Poor upstream watershed conditions, confining valley walls, and several major flood events have resulted in a badly scoured channel and reduced tree cover. Riparian vegetation is in poor condition, and grazing practices have not been conducive to riparian recover. Potential riparian community is sycamore-mixed broadleaf with greater tree species diversity and canopy cover.

Below 3,200 elevation, landform changes, resulting in lower channel gradient, and a wider valley. The Cherry Creek channel is badly braided (divided); this results in massive deposition and formation of point bars, along with channel widening and bank erosion. The riparian area is a mosaic of unvegetated gravel bars, early successional shrub communities, such as burrobrush islands of remnant cottonwood and some mesquite bosque. The riparian area as a whole is badly degraded and far below potential. It has relatively low value for wildlife in its present condition. Potential riparian community type for lower Cherry Creek is cottonwood-willow, as indicated by the abundant seedlings for both species.

The Fish Creek rock daisy, Hohokam agave, Tonto Basin agave, and the Apache buckwheat are known to occur within this segment of the potential River Area and are designated Forest Service sensitive species.

D. Fish and Wildlife:

Fisheries: Cherry Creek supports three native species and has populations of longfin dace, Sonora sucker, red shiner, yellow bullhead, green sunfish, smallmouth bass, rainbow trout, desert sucker, brown trout, speckled dace, and Gila roundtail chub. The habitat quality varies throughout the creek, but is above-average in many places.

The fisheries in Cherry Creek have been identified as having outstandingly remarkable values due to the fact that the stream has been known to contain a stable population of Gila roundtail chub for many years. Presently the Gila roundtail chub is a candidate species on the U.S. Fish and Wildlife threatened and endangered species list, but it is expected to be designated as threatened or endangered within the next five to ten years. In addition, the U.S. Fish and Wildlife Service has proposed Cherry Creek as critical habitat for the endangered razorback sucker.

Wildlife: Game species known to occur within this segment of the potential River Area include deer, bear, doves, band-tailed pigeon, quail, and collared peccary.

Cherry Creek Segment #1-b has been identified as having outstandingly remarkable wildlife value because the potential River Area contains two Endangered and one Threatened species, and also because it provides fair to excellent riparian habitat for a variety of wildlife species. Special wildlife species occurring along Cherry Creek Segment 1-b may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate
Mexican garter snake	- Endangered
Narrow-headed garter snake	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species: Harris' hawk, coati, and the ringtail.

E. Visual Resources:

Visual Quality Objective: Retention
Character Type: Tonto
Character Subtype: Upper Tonto
Variety Class: A-Distinctive

Cherry Creek Segment 1-b has been identified as having outstandingly remarkable scenic value. Segments of the creek are located in a large, spectacular canyon. A road parallels the stream on top of the first canyon bench, but it is not visible to the creek users because of this interesting land form. Nice side canyons with lush riparian vegetation intersect Cherry Creek on the southern end. The adjacent Sierra Ancha mountain range has upturned edges of limestone, sharp angular peaks, and steep canyons. Pinyon-juniper woodlands predominate on the canyon slopes, while mixed conifer may suddenly be encountered around a corner on a north facing slope.

F. Cultural and Historical: There are six known sites (AR-03-12-05-52,-53,-56,-57,-315) within the potential River Area (none are on the National Register). Available site data suggests a prehistoric occupation by the Ancha Mogollon between AD 1200 - 1350. Known sites consist of multiroom masonry pueblos.

LAND USES AND DEVELOPMENTS

A. Land: Cherry Creek Segment 1-b potential River Area is 6.4 miles in length and contains approximately 1,920 acres of National Forest System land. No parcels of private land are located within the potential River Area.

There are no land withdrawals within the potential River Area.

B. Water Rights and Water Resource Developments: One diversion exists near the downstream end, the Ellison Ditch, which conveys up to 1.4 cfs of Cherry Creek flow for irrigation of about seven acres of private land. The effect of this diversion on flow in the potential River Area is small and effect on the free-flowing character is negligible. A streamflow monitoring station, operated by the U.S. Geological Survey, exists within this segment, but has no effect on the free-flowing character of the segment.

C. Transportation Facilities: Forest Development Road #203 parallels the creek for the entire length of the Segment 1-b. The road is a natural surface, unimproved, four-wheel-drive road.

D. Recreation Activities and Facilities: There are no developed recreation sites within this segment of the potential River Area. Dispersed recreation opportunities include cross-country hiking (there are no system trails within the River Area), backpacking, picnicking, camping, fishing, hunting, driving for pleasure, and wildlife watching. The area is very remote, with only one primitive Forest Development Road established there. An estimated 600 recreation visitor days (RVD's) occur within the potential River Area. Possible commercial activity would be outfitter/guide hunting, fishing related services.

E. Special Management Designations: None occur within the potential River Area. The Sierra Ancha Wilderness forms the western boundary of this segment. It was first designated a Wild Area in 1951, and received its Wilderness designation by law in 1964.

F. Mining: There are no acres of potential River Area withdrawn from mineral entry. All acreage remains open to mineral entry.

There are no existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. Segment 1-b is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations or quarries. The potential River Area crosses through portions of the Sierra Ancha Mineral District with numerous known mineral deposits and geologically favorable conditions for occurrences of uranium, copper, and silver. Production of copper and silver occurred in the District during the period of 1917 to 1965, and uranium during the period of 1953 to 1960.

G. Special Uses: Special Use Permits, associated with identified sections within the potential River Area, have been issued to:

USDI	-	- Stream gauging station (MOU)
Gila County		- Road maintenance

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential River Area. Segment 1-b has two allotments established within the potential River Area with approximately 1.5 miles of fence and watergap improvements.

Center Mountain Allotment has 825 authorized animal unit months (AUM's). Approximately 23% of the allotment is within the potential River Area, which would equate to 190 AUM's of grazing annually.

Flying H/Flying V Allotment has 8,800 authorized AUM's. Approximately 0.3% of the allotment is within the potential River Area, which would equate to 26 AUM's of grazing annually.

I. Timber: None of the 1,920 acres are suitable for timber harvest. The area has very limited fuelwood use, but it is open (by permit) for personal fuelwood gathering for dead and down wood, and dead standing juniper.

SOCIAL AND ECONOMIC VALUES

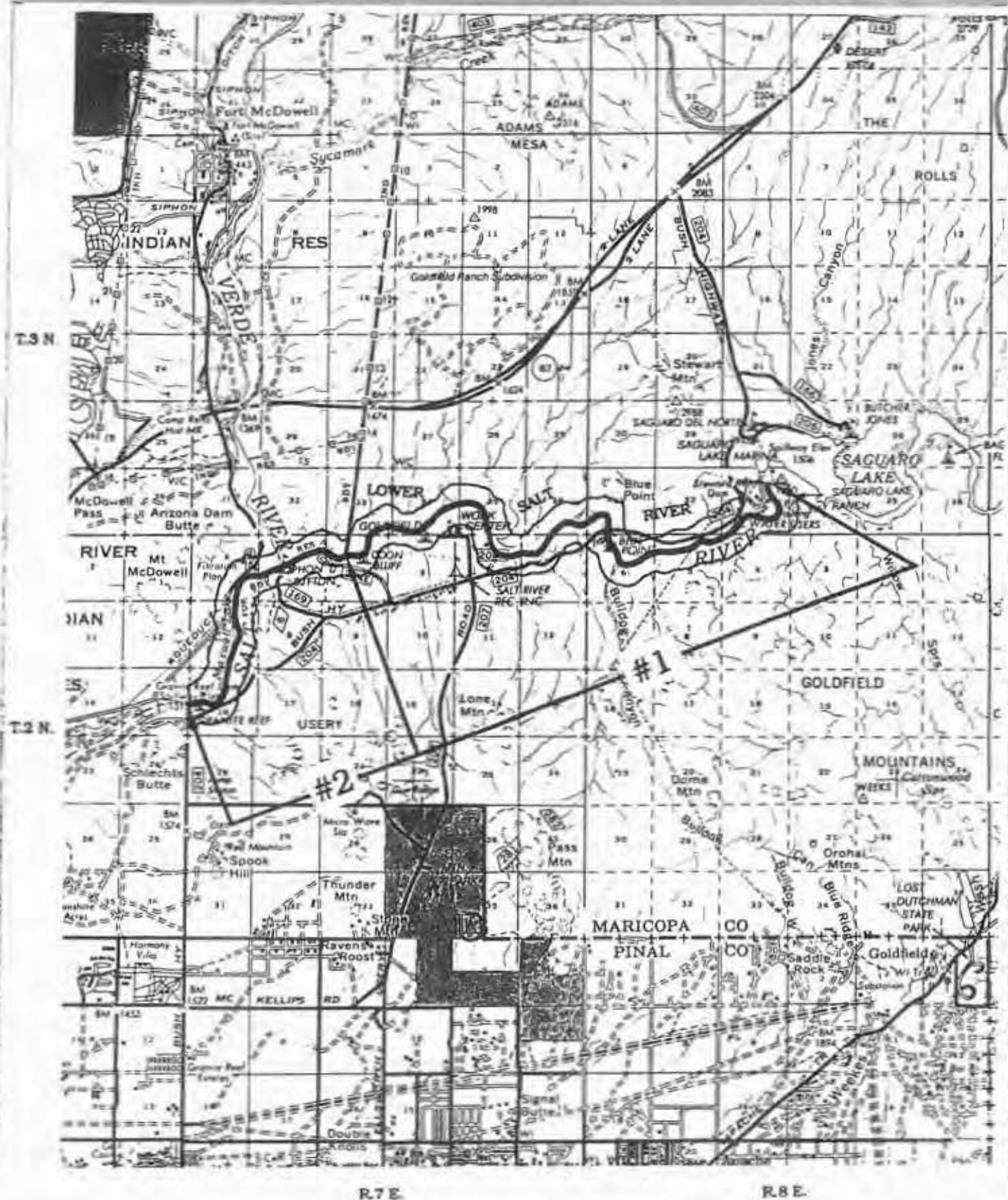
Social: There are various entities of our society that derive social benefits from, and place social value upon, a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for solitude while enjoying the special canyon habitat, while the two livestock permittees derive social benefits from a way of life associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$10.49 per recreation visitor day. An estimated visitation of 600 recreation visitor days results in a total economic value of \$6,294.00 per annum.

Allotment fees are \$1.86 per animal unit month for 216 animal unit months on the allotments which resulted in \$402.00 per annum, in fees being collected by the government. There is no suitable timber for harvest, and consequently no economic benefit or revenue collected.

LOWER SALT RIVER

LOWER SALT RIVER



0 1 2 3 4
MILES



LOWER SALT RIVER - SEGMENT #1

LOCATION

Located in Maricopa County (Congressional District 6), within the Tonto National Forest, the Lower Salt River is located approximately nine miles north of Apache Junction, and 15 miles east of Mesa, Arizona. It is heavily used during the summer months by residents of the Phoenix metropolitan complex, making it one of the most visited stretches of river in the United States. The potential River Area starts just below Stewart Mountain Dam, (built in 1928-1930) with the water flow-rate being regulated and controlled by the Salt River Project.

Total River Length: 89 miles

Segment 1 - 8.7 miles From the boundary of Primary Jurisdiction below Stewart Mountain Dam, to the boundary of the Salt River Indian Reservation.

Segment 2 - 2.6 miles From the boundary of the Salt River Indian Reservation, to immediately above Granite Reef Dam Impoundment.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Lower Salt River Segment #2, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 8.7 miles of stream are evaluated for this resource report.
Total acres in potential Segment #1 River Area: 2,780 acres
Percent administered by Forest Service: 100 %

Township 2 N	Range 7 E	Sections	1.	2.	3.	4.
2 N	8 E		4.	5.	6.	
3 N	7 E		33.	34.	35.	36.
3 N	8 E		31.	32.	33.	34.

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Recreational
Wildlife
Cultural
Ecological
Riparian

D. Classification:

Recreational

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The Lower Salt River is located in the Basin and Range Province of Arizona, characterized by deep, debris-filled desert valleys concealing transitions between ancient mountain ranges. The river flows through extensive terrace sediments indicative of a complex drainage history and downcuts through volcanic tuffs, flows, and granites of Proterozoic age. Terrace cliffs rise up to 200 feet above the river and form prominent buttes along the River segment.

B. Streamflow and Water Quality: Streamflow is perennial. Median flow from 1984 to 1989 was 1,219 cfs. Average flow for the period of record of the USGS gage (61 years), near the upper end of the segment, is 970 cfs. Long-term median flow will be less than this average.

Water quality data from Arizona Department of Environmental Quality, U.S. Geological Survey, and the Forest Service indicates that Arizona water quality standards are generally met. Occasional violations of standards for total dissolved solids and chloride occur, and mercury standards were regularly exceeded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that the reach of the Lower Salt River from Stewart Mountain to the confluence with the Verde River partially supports its designated uses of: warm water Aquatic and Wildlife, Full Body Contact, Domestic Water Source, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: The predominant riparian community on the Lower Salt River is cottonwood-willow community. This community was described by Brown (1982) as the Fremont Cottonwood-Goedding Willow Association. This is one of the rarest riparian communities on the Tonto National Forest. This community makes up small stands along the Lower Salt River dominated by Fremont cottonwood and Goedding willow. Other species include salt cedar, arrowweed, and seepwillow.

The dominant small tree or shrub is velvet mesquite. The most extensive stands of this community, with the largest tree size, occur on elevated terraces which are infrequently flooded or scoured. Total overstory cover is typically high, at 60-70%. Few other trees or shrubs are present. Small numbers of hackberry, catclaw, and graythorn occur. The herbaceous component is low in diversity, consisting principally of the annual grass red brome.

The Lower Salt River has been identified as having outstandingly remarkable ecological values. The mature mesquite bosque, characterized by large mesquite stem size and dense canopy, has high value for recreation uses and as wildlife habitat. The mature bosque stands on the Salt River may be relics of the free-flowing Salt River, predating the construction of dams. The present controlled river flow may not transport sufficient sediment loads to form new terraces, and bosque communities appear to be declining through erosional processes and recreation impacts.

D. Fish and Wildlife:

Fisheries: The Lower Salt River provides the angling public with ample fishing opportunities. Fish species present include bass, sunfish, trout, and several species of catfish. The river's close proximity to metro Phoenix and its many accessible areas makes it an ideal urban fishing site.

Wildlife: Game species known to occur within the potential River Area are deer, doves, quail, collared peccary, cottontails, waterfowl, and bighorn sheep.

The Lower Salt River has been identified as having outstandingly remarkable riparian and wildlife values. The potential River Area provides good to excellent riparian habitat, although human activity in this area is among the most concentrated on the Forest. The area is especially important for bald eagle foraging, and the cottonwood gallery at Blue Point contains a rookery for wading birds. Additionally, the potential River Area provides good riparian habitat for a variety of threatened and endangered wildlife species, and diverse populations of waterfowl, song birds, and raptors. Wildlife species occurring along the Lower Salt River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Lesser long-nosed bat	- Endangered
Yuma clapper rail	- Endangered
Southwestern willow flycatcher	- Proposed endangered

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Osprey	- Threatened
Snowy egret	- Threatened
Mexican garter snake	- Candidate
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
American bittern	- Candidate
Mississippi kite	- Candidate
Desert tortoise	- Candidate
Western red bat	- Candidate
California leaf-nosed bat	- Candidate
Southern yellow bat	- Candidate
Gila monster	- Candidate
Arizona southwestern toad	- Candidate
Desert bighorn sheep	- Candidate

Forest Service sensitive species: Harris' hawk, Swainson hawk, green-backed heron, white-faced ibis, black-crowned night-heron, loggerhead shrike, occult little brown bat, coati, southwestern cave myotis, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Retention
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive - along the stream channel and bank.
	B-Common - for some portions of the hills and ridges of the north shore.

This is one of the only free-flowing sections of the Salt River in the Sonoran Desert. The terrain is moderately varied, except for one spectacular area where the river abuts the steep face of the Goldfield Mountains. The vegetation cover is highly varied and distinctive with its riparian, Sonoran, and associated ecotypes vegetation.

F. Cultural and Historical: The Lower Salt River has been identified as having outstandingly remarkable cultural values. There are 44 known sites within the potential River Area (none on the National Register). The area can be characterized by a prehistoric Hohokam occupation dating from around AD 800 to about 1150, consisting of sherd and lithic scatters suggesting pithouse villages. Historic use of the area is associated with small scale mining, homesteading, water reclamation, Forest Service administration, and government sponsored work projects by the Civilian Conservation Corps (CCC), which began during the closing decades of the 19th century.

LAND USES AND DEVELOPMENTS

A. Land: Segment #1 of potential River Area is 8.7 miles in length, and contains approximately 2,780 acres. There are no parcels of private land contained within it.

Land withdrawals, which encompass the entire River Area, are:

Power withdrawal - Water Power Designation #5
Land withdrawal from Public Land Laws and Mineral Entry:
Bureau of Reclamation - Salt River Project, irrigation purposes
Forest Service - Blue Point Recreation Area

B. Water Rights and Water Resource Developments: Flow in the potential River Area is completely controlled by four dams operated by the Salt River Project (SRP). SRP releases water into the potential River Area when it is needed by downstream water users, typically in the summer, or when storage capacity of the upstream reservoirs is exceeded, which is usually in the winter or spring. No diversions or dams exist on National Forest lands within the potential River Area. Orme Dam was proposed below the confluence of the Salt and Verde Rivers as a component of the Central Arizona Project. This component was dropped as a result of expected impacts to wildlife, recreation, and the Fort McDowell Indian Reservation; it would have inundated the entire river segment. One U.S. Geological Survey gaging station exists within the potential River Area, but has no effect on the free-flowing character of the segment.

C. Transportation Facilities: There is a paved access to the river at developed recreation sites located along this portion of the Lower Salt River. Numerous remnants of closed unimproved roads exist in the area, and some are being used as foot paths. All open roads in the area are paved.

D. Recreation Activities and Facilities: Three developed, day-use, recreation sites are located within the potential River Area. These are:

Water Users Recreation Site	(river access point)	1,500 PAOT's*
Blue Point Beach Recreation Site	(river access point)	250 PAOT's*
Goldfield Recreation Site	(river access point)	1,430 PAOT's*

* PAOT - Capacity of developed recreation sites expressed as 'people at one time'.

Dispersed recreation activities include river-floating, boating, hiking, car-camping, picnicking, swimming, fishing, hunting, off-highway driving, driving for pleasure, horseback riding, and wildlife watching. Access is gained from State Highway 87 and other paved roads. The area is in close proximity to the city of Mesa. An estimated 500,000 recreational visitor days occur annually within the potential River Area.

Commercial activity consist of: One concessionaire who offers overnight accommodations, horse and inner-tube rentals, and river-rafting trips; the headquarters facilities for the bus system which is located in this segment (as are four of the shuttle bus pick-up/drop-off stops), and one outfitter/guide company which provides river-running trips.

The Lower Salt River has been identified as having outstandingly remarkable recreational values. The potential River Area is one of the most heavily used rivers for non-motorized recreation activities in the United States. Flowing through a Sonoran Desert landscape, flanked by native mesquite bosques, this river provides excellent recreation opportunities for the two million Phoenix residents, and surrounding communities, who are within a one hour drive. Up to 30,000 people visit this area on each hot summer weekend. Tubing (floating the river in rubber inner tubes) is the most popular activity, but a wide variety of other activities are also enjoyed.

E. Special Management Designations:

Wilderness - None

Blue Point Cottonwood Botanical Area - 480 acres

The Tonto Land and Resource Management Plan has designated this area as a Botanical Area. It also has been identified by the State of Arizona Parks Board as a potential natural area. Management is directed toward maintaining natural conditions and natural processes for public enjoyment, demonstration, and study. The visual resource is an important consideration in the management of this area.

F. Mining: There are approximately 2,680 acres withdrawn from mineral entry within the potential River Area; the remaining 100 acres are also closed to mineral entry.

There are no existing claims within Segment #1 of the potential River Area.

There are no oil or gas leases within Segment #1, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within Segment #1. Known occurrences of silver and barite are located approximately three miles south/southwest of the river segment.

G. Special Uses: Special Use Permits within the potential River Area are:

Salt River Project	- Powerline
US West	- Telephone line
Salt River Recreation	- Rental services
Salt River Water Users Association	- Road
Maricopa County Board of Supervisors	- Road
U.S. Department of Interior	- Stream gaging station
Saguaro Lake Ranch	- Resort
Desert Voyager Guided Raft Trips	- River running

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment #1, the potential River Area, but there is one grazing allotment (the Goldfield Allotment), and the Heber-Reno Sheep Driveway. There is no authorized livestock permitted at this time within the allotment and there are no range improvements within the potential River Area. The Heber-Reno Sheep Driveway currently authorized 4,000 sheep for a six-day period each year.

I. Timber: None of the 2,780 acres are suitable for timber harvest. No sales have been transacted nor are there any future sales planned. The area has extremely limited fuelwood use. The area within this segment is open, under permit, for dead and down personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the sheep driveway livestock permittee derives social benefits from the opportunity to enjoy a way of life associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$10.49 per recreation visitor day. An estimated visitation of 500,000 recreation visitor days occurred within Segment #1 of the potential River Area, resulting in a total economic value of \$5,245,000.00 per annum.

The combined earnings of the recreation commercial public services in 1991 was over 1,500,000 for both river Segments #1 and #2. This resulted in a return to the US Government of \$32,000.

The sheep driveway returns a gross revenue of approximately \$300 annually to the US Treasury. There is no suitable timber for harvest.

LOWER SALT RIVER - SEGMENT #2

LOCATION

Located in Maricopa County (Congressional District 6), within the Tonto National Forest, the Lower Salt River is located approximately nine miles north of Apache Junction, and 15 miles east of Mesa, Arizona. It is heavily used during the summer months by residents of Phoenix metropolitan complex, making it one of the most visited stretches of river in the United States. The potential River Area starts just below the Stewart Mountain Dam (built in 1928-1930); water flow-rate is regulated and controlled by the Salt River Project.

Total River Length: 89 miles

Segment 1 - 8.7 miles From the boundary of Primary Jurisdiction Area below Stewart Mountain Dam to the boundary of the Salt River Indian Reservation.
Segment 2 - 2.6 miles From the boundary of the Salt River Indian Reservation to just above Granite Reef Dam Impoundment.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Lower Salt River Segment #1, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 2.6 miles of the South one-half of the stream and adjacent areas is evaluated for this resource report. The north one-half of the stream and adjacent areas located on the Salt River Indian Reservation were not evaluated, and are not a part of this report.

Total acres in potential Segment #2 River Area: 430 acres
Percent administered by Forest Service: 100 %

Township	2 N 3 N	Range	7 E 8 E	Sections	4, 5, 6, 7 32, 33
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B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Recreational
Wildlife
Cultural
Ecological
Riparian

D. Classification:

Recreational

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The Lower Salt River is located in the Basin and Range Province of Arizona, characterized by deep, debris-filled desert valleys concealing transitions between ancient mountain ranges. The River flows through extensive terrace sediments indicative of a complex drainage history and downcuts through volcanic tuffs, flows, and granites of Proterozoic age. Terrace cliffs rise up to 200 feet above the river and form prominent buttes along the River segment.

B. Streamflow and Water Quality: Streamflow is perennial. Median flow from 1984 to 1989 was 1,219 cfs. The USGS gage, located near the upper end of Segment #1, indicates that for the period of record (61 years) the average streamflow is 970 cfs, although the long term median flow will be less than this average.

Water quality data from Arizona Department of Environmental Quality and the U.S. Geological Survey, and the Forest Service indicates that Arizona water quality standards are generally met. Occasional violations of standards for Total Dissolved Solids and chloride occur, with mercury standards being regularly exceeded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that the reach of the Lower Salt River from Stewart Mountain Dam to the confluence with the Verde River partially supports its designated uses of: Warm water Aquatic and Wildlife, Full Body Contact, Domestic Water Source, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: The predominant riparian community on the Lower Salt River Segment #2, is mesquite bosque. This community was described by Brown (1982) as the Mesquite Association. This is a common riparian community on the Tonto National Forest, though mature bosque is declining due to erosion and human impacts.

The dominant small tree or shrub is velvet mesquite. The most expansive stands of this community, with the largest tree size, occur on elevated terraces which are infrequently flooded or scoured. Total overstory cover is typically high, at 60-70%. Few other trees or shrubs are present. Small numbers of hackberry, catclaw, and graythorn occur. The herbaceous component is low in diversity, consisting principally of the annual grass red brome.

The Lower Salt River has been identified as having outstandingly remarkable ecological values. The mature mesquite bosque, characterized by large mesquite stem size and dense canopy, has high value for recreation uses and as wildlife habitat. The mature bosque stands on the Salt River may be relics of the free-flowing Salt River, predating the construction of dams. The present controlled river flow may not transport sufficient sediment loads to form new terraces, and bosque communities appear to be declining through erosional processes and recreation impacts.

Small stands of cottonwood-willow community occur along the Lower Salt River. These stands are dominated by Fremont cottonwood and Goodding willow. Other species include salt cedar, arrowweed, and seepwillow.

D. Fish and Wildlife:

Fisheries: The Lower Salt River provides the angling public with ample fishing opportunities. Fish species present include bass, sunfish, trout, and several species of catfish. The river's close proximity to metro Phoenix, combined with the river's many accessible areas, makes it an ideal urban fishing site.

Wildlife: Game species known to occur within the potential River Area are deer, quail, collared peccary, doves, cottontails, waterfowl, and bighorn sheep.

The Lower Salt River has been identified as having outstandingly remarkable wildlife and riparian values. The potential River Area provides good to excellent riparian habitat, although human activity in this area is among the most concentrated on the Forest. Additionally, the potential River Area provides good riparian habitat for a variety of threatened and endangered wildlife species, and for diverse populations of waterfowl, song birds, and raptors. Special wildlife occurring along the Lower Salt River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Lesser long-nosed bat	- Endangered
Yuma clapper rail	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Snowy egret	- Threatened
Mexican garter snake	- Candidate
Desert tortoise	- Candidate
Western red bat	- Candidate
California leaf-nosed bat	- Candidate
Gila monster	- Candidate
Arizona southwestern toad	- Candidate
White-faced ibis	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Osprey	- Threatened
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
American bittern	- Candidate
Mississippi kite	- Candidate
Southern yellow bat	- Candidate
Desert bighorn sheep	- Candidate

Forest Service sensitive species: Harris' hawk, green-backed heron, black-crowned night-heron, goat, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Retention
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive - along the stream channel and bank B-Common - for some portions of the hills and ridges

This is one of the only free-flowing sections of the Salt River in the Sonoran Desert. The terrain is moderately varied. The vegetation cover is highly varied and distinctive with it riparian, Sonoran, and associated ecotypes vegetation.

F. Cultural and Historical: The Lower Salt River has been identified as having outstandingly remarkable cultural values. There are 44 known sites within the potential River Area (none on the National Register). The area can be characterized by a prehistoric Hohokam occupation dating from around AD 800 to about 1100, consisting of sherd and lithic scatters suggesting pithouse villages. Historic use of the area is associated with small scale mining, homesteading, water reclamation, Forest Service administration, and government sponsored work projects Civilian Conservation Corps (CCC), which began during the closing decades of the 19th century.

LAND USES AND DEVELOPMENTS

A. Land: Segment #2 of the potential River Area is 2.6 miles in length, and contains approximately 430 acres, with no parcels of private land contained within it. Only the southern side of the river and its adjacent areas are included in this report. The northern side is within the Salt River Indian Reservation, and is not being evaluated.

Land withdrawals, associated with sections within the potential River Area, are:

Power withdrawal - Water Power Designation #8

Land withdrawn from Public Land Laws and Mineral Entry:

Bureau of Reclamation	- Temporary withdrawal, water resource
Bureau of Reclamation	- Salt River Project, irrigation purposes
Forest Service	- Coon Bluff Recreation Site
Bureau of Reclamation	- Withdrawal application (7/11/1967) Central Arizona Project
	- Withdrawal application (2/17/1971) Central Arizona Project

B. Water Rights and Water Resource Developments: Flow in the potential River Area is completely controlled by four dams operated by the Salt River Project (SRP). SRP releases water into the potential River Area when it is needed by downstream water users, typically in the summer, or when storage capacity of the upstream reservoirs is exceeded, typically in the winter or spring. No diversions or dams exist on National Forest lands within the potential River Area. Orme Dam was once proposed below the confluence of the Salt and Verde Rivers as a component of the Central Arizona Project. This component was dropped as a result of expected impacts to wildlife, recreation, and the Fort McDowell Indian Reservation; it would have inundated a substantial portion of the river segment. One U.S. Geological Survey gauging station exists within the potential River Area, but has no effect on the free-flowing character of the segment.

C. Transportation Facilities: There is a paved access to the river at developed recreation sites located along this portion of the Lower Salt River. Numerous remnants of closed unimproved roads exist in the area, some of which are being used for hiking. All open roads in the area are paved. There is an interpretive trail at the Phon D. Sutton Recreational Site.

D. Recreation Activities and Facilities: Three developed, day-use, recreation sites are located within the potential River Area. These are:

Coon Bluff Recreation Site	(river access point)	595 PAOT's*
Phon D Recreation Site	(river access point)	2,985 PAOT's*
Granite Reef Recreation Site	(river access point)	150 PAOT's*

*PAOT - Capacity of developed recreation sites expressed as "people at one time".

Dispersed recreation activities include river-floating, boating, hiking, car-camping, picnicking, swimming, fishing, hunting, driving for pleasure, horseback riding, and wildlife watching. Access to the potential River Area is from State Highway 87 and other paved roads. The area is in close proximity to the city of Mesa. An estimated 100,000 recreational visitor days annually occur within the potential River Area.

Commercial activity consist of: One outfitter/guide concessionaire which provides tube rental and shuttle bus services. The shuttle bus makes six pick-up/drop-off stops: two stops are located in Segment #2, with the other four stops located in Segment #1. Two outfitter/guides also provide river-running services.

The Lower Salt River has been identified as having outstandingly remarkable recreational values. The potential River Area is one of the most heavily used rivers for non-motorized recreation activities in the United States. Flowing through a Sonoran Desert landscape, flanked by native mesquite bosques, this river provides excellent recreation opportunities for the two million residents of the Phoenix metropolitan complex who are within a one-hour drive. Up to 30,000 people visit this area on each hot summer weekend. Tubing (floating the river in rubber inner tubes) is the most popular activity, but a wide variety of other activities are also enjoyed.

E. Special Management Designations: None occur within the potential River Area.

F. Mining: All acres within the potential River Area are withdrawn from mineral entry.

There is one existing claim which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within Segment #2, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within this segment. Areas bordering to the south of the potential River Area have no known mineral deposits, but geologic terrain indicates favorable or possible conditions for occurrences of gold and silver. Known occurrences of silver and barite are located approximately three miles south/southwest of the potential River Area.

G. Special Uses: A Special Use Permit has been issued to:

Salt River Project	- Powerline
US West	- Telephone line
Salt River Recreation	- Rental services
Salt River Water Users Association	- Road
Seguro Lake Ranch	- Resort
Desert Voyager Guided Raft Trips	- River running

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment #2 of the potential River Area, but there is one grazing allotment (the Goldfield Allotment). At this time there are no authorized livestock permitted within that allotment.

I. Timber: None of the area is suitable for timber harvest. No sales have been transacted, nor are there any future sales planned. The area has extremely limited fuelwood use. The area within the potential River Area is open (under permit) for dead and down personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for relaxation, viewing of scenery and wildlife in an area with unique, natural conditions.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$10.49 per recreation visitor day. An estimated visitation of 100,000 recreation visitor days occurred within Segment #2, resulting in a total economic value of \$1,049,000.00 per annum.

The combined earnings of the recreation commercial public services in 1991 was over \$1,500,000 for both River Segments #1 and #2. This resulted in a gross revenue of \$32,000 to the US Treasury.

At this time, no grazing permits are being issued for Segment #2 of the potential River Area. There is no suitable timber for harvest.

PARKER CREEK

PARKER CREEK



PARKER CREEK

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Parker Creek is a diverse stream that flows from the upper mixed conifer forests down into the Sonoran Desert. Its headwaters are in the Sierra Ancha Mountains approximately 30 miles north of Globe, Arizona, and it flows southerly towards Roosevelt Reservoir. The creek segment found potentially eligible for designation starts at Rock Spring and continues to the confluence with Cottonwood Creek. The rich, varied riparian habitat is in excellent condition and supports wildlife and migratory bird populations.

Total Creek Length: 8.5 miles

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segments Found Potentially Eligible for Designation:

Approximately 8.2 miles of stream are evaluated for this resource report.
Total acres in potential River Area: 2,600 acres
Percent administered by Forest Service: 100 %

Township	4 N	Range	13 E	Sections	2, 3
	5 N		13 E		1, 12, 13, 14, 23, 24, 25, 26
					34, 35
	5 N		14 E		5, 6, 7, 8

B. Eligibility:

Free-flowing - Yes
Impoundments - Small weirs

C. Outstandingly Remarkable Values (ORV's):

Scenic
Wildlife
Riparian
Ecological

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Parker Creek runs from the upper Sierra Ancha range through the extensive terrace deposits bordering Roosevelt Lake within the central portion of the Transition Zone between the Colorado Plateau and the Basin and Range Provinces of Arizona. This Transition Zone lies in a diagonal strip bisecting the state, and is characterized by fault-bordered mountains and narrow, shallow valleys. Canyons in the upper reaches of Parker Creek offer excellent exposure to igneous and sedimentary rocks of Proterozoic age. These units form steep canyon walls and gorges with cliffs towering over 1,000 feet in the hills above the creek. Lower reaches continue down into the Tonto Basin through Tertiary-Quaternary alluvium and terrace deposits.

B. Streamflow and Water Quality:

Streamflow is mostly perennial. Median flow is estimated to be 0.1 cfs.

Water quality data from the Forest Service indicates that Arizona water quality standards are generally met.

As required by Arizona Revised Statute 49-221D, water quality standards are expressed in terms of the water resources that are identified as needing to be protected. This stream was not rated in the 1992 Arizona Water Quality Assessment Report, but the identified designated uses include: warmwater Aquatic and Wildlife, Full Body Contact, and Agricultural Livestock Watering.

C. Vegetation:

Upper Parker Creek from section 13, upstream to about one mile above State Highway 288, is an alder community type. It is described by Brown (1982) as the Arizona Alder Association. This densely forested community is relatively common on the Tonto National Forest at elevations above 4,500 feet.

Seven tree species are well represented, and include alder, white oak, walnut, sycamore, Douglas fir, Gambel's oak, and box elder. The tree overstory is dense, measuring 86%. Shrubs are abundant with coffeeberry, Arizona grape, poison ivy, and chokecherry the most abundant of the 12 species. Shrub canopy is dense, measuring 38%. The herbaceous component is sparse, with columbine, and bracken fern most abundant. This healthy, diverse riparian community provides a dense root system which maintains the moderately confined stream channel in a fairly stable state.

The central portion of Parker Creek (sec's 13, 23, 24) passes through a very steep, narrow canyon, where very confining valley walls and severe scouring limit vegetation development. This exceptionally scenic canyon supports only a few scattered sycamore trees. The channel is very steep and boulder strewn.

Downstream, where Parker Creek leaves the narrow canyon and becomes less confined (section 26), there is a well developed riparian area. This willow-sycamore community type is not described by Brown (1982). This site is characteristic of several Tonto National Forest mixed broadleaf riparian forests, where community relationships are poorly defined. Goodding willow and Sycamore are approximately equal in community dominance. Other important trees include cottonwood, alder, hackberry, walnut, and Bonpland willow. Tree canopy is greater than on the upper Parker Creek alder community, at 117%. Shrubs are a minor component. Herbaceous species are abundant and diverse, including four species of well-represented rushes.

Further downstream, Parker Creek forms a deep alluvial fan, which is xeric, supporting only a sparse burrobrush riparian community.

Parker Creek has been identified as having outstandingly remarkable ecological and riparian values. Upper Parker Creek is within the Sierra Ancha Experimental Forest, and is ungrazed. It has very high value as a benchmark for comparison with other Tonto National Forest alder communities which are not meeting grazing management objectives. The downstream riparian community is in good condition due to the area being within a livestock holding pasture which is grazed only for short periods. Again, this site has high value as a benchmark area, for comparison with similar ecological sites which are not as well managed. Also of ecological importance is that the Arizona agave, listed as endangered by the U.S. Fish and Wildlife Service, and the Mogollon fleabane, listed as a candidate by the U.S. Fish and Wildlife Service, are known to occur within the potential River Area.

D. Fish and Wildlife:

Fisheries: No fishing occurs within the potential River Area and there are no known records for threatened and endangered, or sensitive fish species.

Wildlife: Game species known to occur within the potential River Area include deer, bear, doves, quail, turkey, and tree squirrels.

Parker Creek has been identified as having outstandingly remarkable wildlife value, although there are no known threatened, endangered, or sensitive species of wildlife occurring in the potential River Area. The area provides potential habitat for: the southwestern willow flycatcher (listed as proposed endangered) and the peregrine falcon (list as endangered on the U.S. Fish and Wildlife Service's threatened and endangered species list); the occult little brown bat and the southwestern cave myotis (listed as candidate species by the U.S. Fish and Wildlife Service); and the western red bat and the common black-hawk which are Forest Service sensitive species. Excellent habitat is provided for the many resident and migratory birds.

E. Visual Resources:

Visual Quality Objective: Retention for the North half of the creek
Partial Retention for the South half of the creek
Character Type: Tonto
Character Subtype: Upper Tonto
Variety Class: A-Distinctive for the North half of the creek
B-Common for the South half of the creek

Parker Creek has been identified as having outstandingly remarkable scenic values. The narrow gorge that it passes through in its middle is recognized as a spectacular landscape feature. This perennial stream crosses a diverse variety of vegetation, its headwaters start in a mixed pine/fir forest and it ends in a palo verde/saguaro Sonoran Desert. The terrain is moderately varied with broad slopes, rolling hills, and dissected plateaus.

F. Cultural and Historical:

There are 15 known prehistoric sites within the potential River Area (none on the National Register). Prehistoric occupation by the Ancha Mogollon, between AD 1100 - 1400, ranges from sherd and lithic scatters to multiroom structures. Historic use of the area dates between 1920 and 1940 and is associated with the travel/tourism along the present day Young Highway (State Highway #288). During the late 1800's and early 1900's, the section of road between Globe and Pleasant Valley was known as the Globe-Young-Holbrook Road, and was the travel route for hauling timber from Sawmill Flat to Roosevelt for the construction of Roosevelt Dam. The old Experimental Station Headquarters contains several structures which are historical.

LAND USES AND DEVELOPMENTS

A. Land:

Parker Creek potential River Area is 8.2 miles in length, and contains approximately 2,600 acres; there are no parcels of private land.

Land withdrawals within the potential River Area have been made for the Experimental Forest, except for a portion of section 1, T.5N., R13E., which is open to mineral entry according to status.

B. Water Rights and Water Resource Developments: The U.S. Geological Survey operates a streamflow gauge within the potential River Area that consists of two sharp crested weirs set across the channel. Effect on the free-flowing character of the reach is negligible.

C. Transportation Facilities: State Highway 288 parallels this stream for approximately one mile. Access to the northern boundary of this drainage is provided by Parker Creek Trail #160. The potential River Area can also be reached by Forest Development Roads #213 and #488. All of the Forest roads mentioned are unimproved, natural surface, and recommended for high-clearance vehicles.

D. Recreation Activities and Facilities: There are no developed recreation sites within the potential River Area. One Forest system trail, Parker Creek Trail #160, parallels the creek for 7 1/2 miles. State Highway 288 and Forest Development Road #488 and #213 are in the area and provide recreation access. Dispersed recreation activities include hiking, backpacking, camping, picnicking, and driving for pleasure. An estimated 15,000 recreation visitor days (RVD's) occur within the potential River Area where road access is available, and 200 RVD's in the unroaded sections. Commercial activities would be outfitter/guide hunting and hiking-related services on a Forest-wide scale. Environmental study activities associated with the Experimental Station would also occur.

E. Special Management Designations:

Wilderness - None

Sierra Ancha Experimental Forest - 13,371 acres

The Experimental Forest was established and managed for purposes of research on vegetative treatments for increasing water yield. The Forest is operated by the Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado, often cooperatively with Arizona State University and the University of Arizona. Approximately 55% of the potential River Area (4.5 miles) is contained within the Experimental Forest boundaries.

Upper Forks Parker Creek Research Natural Area - 1,288 acres

The Research Natural Area is surrounded and contained within the boundary of the Sierra Ancha Experimental Forest, and was established and managed to provide opportunities for nondisruptive research and education. Approximately 50% of the Research Natural Area would be within the potential River Area.

F. Mining: Approximately 2,330 acres of potential River Area are withdrawn from mineral entry; the remaining acres are open to mineral entry.

There are no existing claims identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. Parker Creek is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the area. Portions of the potential River Area extend through the Sierra Ancha Mining District, which produced copper and silver during the period of 1917 to 1965, and uranium during the period of 1953 to 1960. In addition, the area is adjacent to known occurrences of manganese.

- G. Special Uses: Special Use Permits issued within the potential River Area are:
- US West - Telephone line
 - Arizona Department of Transportation - Highway
 - Arizona Board of Regents - Education center
 - Arizona Department of Transportation - Maintenance camp
 - Prescott College - Education center
 - Various outfitter/guide related services for hunting and hiking.

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential River Area. There is one grazing allotment (the A Cross/Dagger Allotment) within the potential River Area. It has approximately two miles of fence, one mile of livestock trail, and one-half mile of pipeline, plus a livestock watering trough within the potential River Area. The allotment has 6,140 authorized animal unit months (AUM's). Approximately 9% of the allotment is within the potential River Area, which would equate to 176 AUM's of grazing annually.

- I. Timber: None of the potential River Area is designated as suitable for timber harvest.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

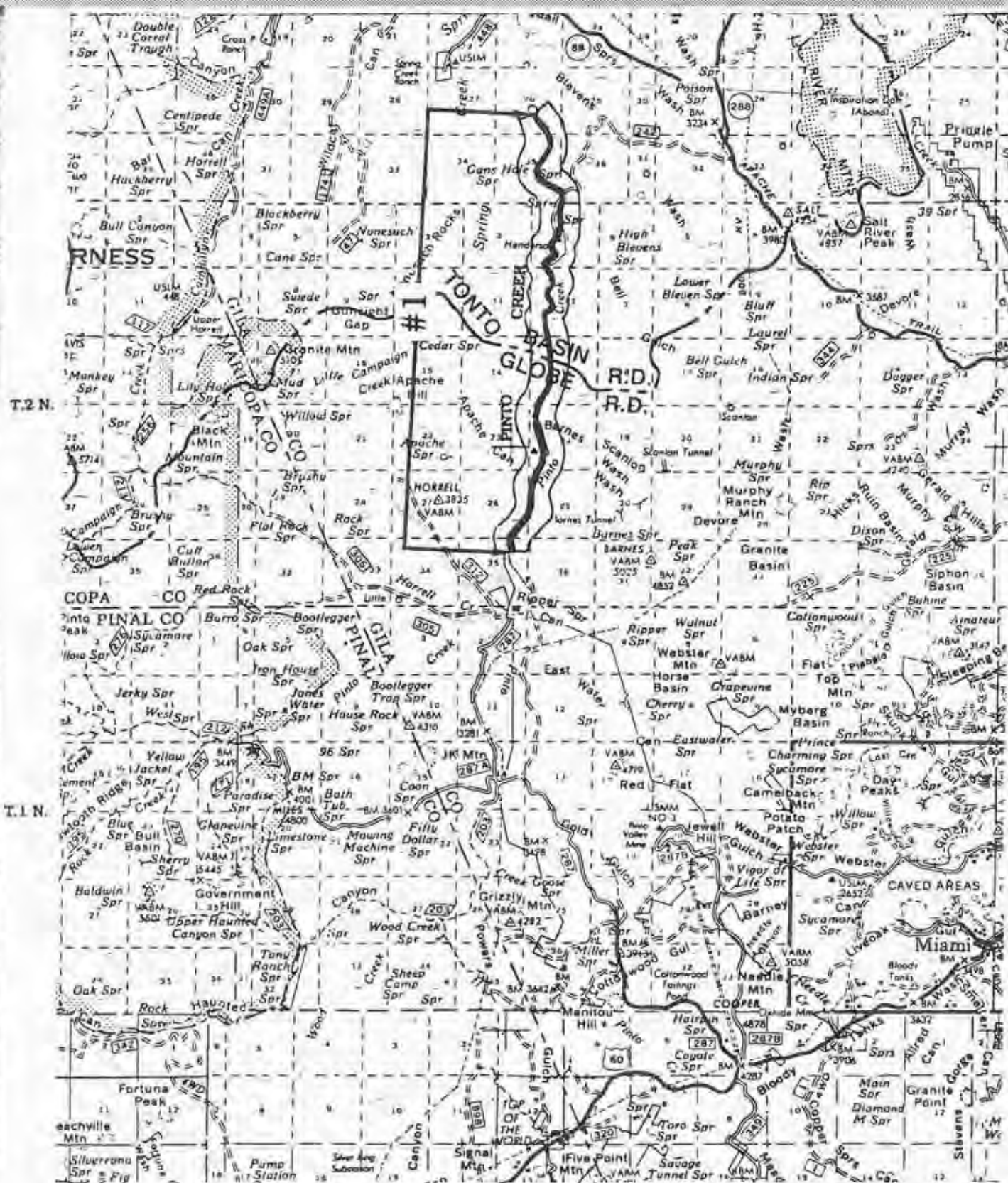
Recreational users derive social benefits from the opportunities for solitude, relaxation, and viewing of scenery and wildlife in an area with preserved unique, natural conditions. The Livestock permittee derives social benefits from a way of life associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$10.49 for roaded access areas, \$13.36 for unroaded access areas, per recreation visitor day. An estimated visitation of 15,000 and 200 recreation visitor days occurred within the potential River Area, resulting in a total economic value of \$160,022.00 per annum.

The 1993 grazing fees are \$1.86 per animal unit month for a total of 176 animal unit months, occurring within the potential River Area, resulting in \$327.00 per annum in fees being collected by the government. There is no timber suitable for harvest within the potential River Area.

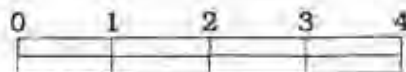
PINTO CREEK

PINTO CREEK



R13 E.

R14 E.



MILES



NORTH

PINTO CREEK

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest. Pinto Creek's headwaters are in the Superstition Wilderness, west of the town of Globe, Arizona. The creek flows northward, crossing State Highway 88 before emptying into Roosevelt Lake. The potential River Area begins north of the private property, Layton Ranch, and extends northward to the lower end of the Pinto Box.

Total Creek Length: 28 miles

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segment Found Potentially Eligible for Designation:

Approximately 8.4 miles of stream are evaluated for this resource report.

Total acres in potential River Area: 2,420 acres

Percent administered by Forest Service: 96 %

Township	2 N	Range	13 E	Sections	1, 2, 11, 12, 13, 14, 23, 24, 25,
					26, 35, 36
	3 N		13 E		26, 35, 36

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Riparian
Ecological

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Pinto Creek is located within the Transition Zone of Arizona, a broad zone of nearly horizontal mountain ranges which extend diagonally across the state and separate remaining Colorado Plateau and Basin and Range Provinces. The area is underlain by granite and related crystalline rocks of Precambrian age, tuffs and gravels of Tertiary age and Quaternary alluvial deposits. The topography is extremely irregular and varied due to the effects of erosion on complexly faulted structures and diverse rock formations. Portions of the creek flow through narrow gorges where bedrock outcrops rise over 600 feet in the hills above the creek.

B. Streamflow and Water Quality: Streamflow is mostly perennial. Median flow for five years of records has been 2.1 cfs.

Water quality data from Arizona Department of Environmental Quality and the Forest Service indicates that Arizona water quality standards are met, except for violations of standards for pH, copper, soluble solids, zinc, and lead in 1990. Violation of narrative standards also occurred due to a breach in a mine tailings dam.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates this stream is in non-support of its designated uses, which are: warmwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: Pinto Creek supports a cottonwood-willow community type, described by Brown (1982) as the Fremont cottonwood-Goedding willow Association. Pinto Creek has been identified as having outstandingly remarkable ecological values, in that this is the rarest riparian community on the Tonto National Forest.

Dominant tree species include Fremont cottonwood, Goedding willow, sycamore, and alder. The community is early to mid-seral, and largely lacks old age-class trees. Other age classes are all well represented. The tree overstory canopy is dense, varying from 50-77%. Shrub cover is sparse. The herbaceous component is luxuriant and diverse. Dominant herbaceous species include scouring rush, sedges, rabbitfoot grass, cattail, water bentgrass, and bermuda grass.

The dense canopy and diversity of tree age-classes provides important habitat for breeding neotropical birds and other wildlife species.

Pinto Creek has also been identified as having outstandingly remarkable riparian values. Riparian condition is only fair on the upstream one-half of the potential River Area, though the trend is up in response to a recently implemented livestock grazing program; the riparian condition is good on the lower one-half, where no livestock grazing use has occurred in recent years. This riparian area has high value as a benchmark for documenting recovery of this rare community, and for use in a comparison with other Tonto National Forest cottonwood-willow communities which are not yet meeting livestock management objectives. The Pinto Creek channel was significantly widened by a 25-year frequency flood during the winter of 1992-93, and some riparian vegetation loss occurred. Prior to the flood event, channel stability was fairly good and floodplain development was improving. Natural recovery is expected to be significant within 2 to 3 years, since flood events enhance conditions for regeneration of cottonwood and willow.

The potential River Area includes, or has suitable habitat to include, the Arizona hedgehog cactus is listed as endangered, and the Tonto Basin agave is listed as a candidate species on the U.S. Fish and Wildlife Service threatened and endangered species list.

D. Fish and Wildlife:

Fisheries: The fish community at Pinto Creek is dominated by native fish. Because of the wide range of introduced, exotic fish, this is unusual. The native fish include longfin dace and desert sucker. The few green sunfish that are present are not currently considered a serious threat to the native fish populations. In the past, the native fish community has been threatened by unauthorized mine tailing spills into the creek, however it is anticipated that no future spills will occur from this mine.

Wildlife: Game species known to occur within the potential River Area include deer, bear, rabbits, quail, and collared peccary.

The potential River Area provides moderate to good riparian habitat for a variety of threatened, endangered, or sensitive species which may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Southwestern willow flycatcher	- Proposed endangered
Mexican garter snake	- Candidate
Arizona southwestern toad	- Candidate
Swainson hawk	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Belted kingfisher	- Candidate
Lowland leopard frog	- Candidate
Common black-hawk	- Candidate
Western red bat	- Candidate

Forest Service sensitive species:

Harris' Hawk, cost, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Modification
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	B-Common

Pinto Creek has been identified as having outstandingly remarkable scenic values. This perennial lazy flowing stream with its lush and diverse riparian vegetation provides a stark contrast to the surrounding chaparral low country. The medium to tall overstory trees provide filtered shade over the babbling stream. Varied steep to broad canyon walls abut the stream with numerous rock outcrops meeting the stream banks. The stream, even though very shallow in many places, tends to be broad in width.

F. Cultural and Historical: There are two known sites (AR-03-12-06-74 & -75) within the potential River Area (none are on the National Register). From the limited information available, the area was occupied between AD 1150 - 1350 by the Salado Indians who constructed small multiroom masonry sites over-looking the creek bottom.

LAND USES AND DEVELOPMENTS

A. Land: Pinto Creek potential River Area is 8.4 miles in length and contains approximately 2,420 acres. There are five parcels of private land within the potential River Area.

2,322 acres (96%) National Forest

98 acres (4%) private land:

51 acres in: sec. 1, T. 2 N., R. 13 E. G&SRBM

32 acres in: sec. 24, T. 2 N., R. 13 E.

Three, five acre parcels in: sec. 26, T. 2 N., R. 13 E.

There are no land withdrawals within the potential River Area.

B. Water Rights and Water Resource Developments: Application for an instream flow water right was made by the Forest Service in 1983. The Arizona Department of Water Resources (ADWR) issued a permit for this application in 1992. Instream flows permitted by ADWR range from 1 cfs in November through March, to 2.69 cfs in June.

A stream flow gage operated by the Pinto Valley Mine is the only diversion dam located on National Forest lands within the potential River Area. The gage consists of a weir and water stage recorder. Its effect on the free-flowing character is negligible. No surface water diversions exist upstream, but one small dam (Simpson Lake) impounds approximately six acre feet of water approximately 13 miles upstream of the potential River Area. A major open pit copper mine is proposed approximately eight miles upstream of the potential River Area and proposes to reroute about .25 miles of Pinto Creek around the pit in a diversion channel. Neither feature will affect the free-flowing character of Pinto Creek. Numerous existing and proposed wells withdraw ground water within the Pinto Creek basin, but the effect of these withdrawals on stream flow in the creek is unknown.

C. Transportation Facilities: The northern portion of the potential River Area is accessed by Forest Development Road # 242. This is a natural surfaced, unimproved road that provides access to private land on the creek. The creek crossing is unimproved. The southern section of the potential River Area can be accessed by Forest Development Road # 287. This road provides access to mining claims in the area.

D. Recreation Activities and Facilities:

There are no developed recreation facilities within the potential River Area. Dispersed recreation activities include cross-country hiking and backpacking (there are no system trails within the area), picnicking and bird watching. The area is near State Highway 88, but access is limited to a primitive dirt road and travel within the potential River Area is primarily by foot or horse. An estimated 1,500 recreation visitor days (RVD's) occur within the potential River Area. Commercial activities include outfitter/guide hunting-related services on a Forest-wide scale.

E. Special Management Designations:

None occur within the potential River Area.

F. Mining:

None of the potential River Area is withdrawn from mineral entry; all acreage remains open to mineral entry.

There are approximately 103 existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. Pinto Creek is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the area. The potential River Area of Pinto Creek extends through the Wagner Mineral District with a historic production record of approximately 20 tons of tungsten. Although the area has few or no known mineral deposits, geologic terrane exhibits conditions possible for the occurrence of silver, gold, and copper.

G. Special Uses: Special Use Permits issued, associated with identified sections within the potential River Area, are:

- Pinto Valley Copper Corporation - Powerline
- Water transmission pipeline

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential River Area; there are three grazing allotments within the potential River Area which have approximately two miles of fence, one mile of livestock trail, and one-half mile of pipeline, plus a livestock watering trough located within the area.

Approximately 26% of the Havens Allotment is within the potential River Area, but at this time it has no authorized animal unit months (AUM's).

Poison Springs Allotment has 4,740 authorized AUM's. Approximately 0.3% of the allotment is within the potential River Area, which would equate to 14 AUM's of grazing annually.

Campaign Allotment has approximately 0.1% of the allotment within the potential River Area, but has no AUM's, as livestock are unable to access this portion of the allotment.

Pinto Creek Allotment has 7,022 authorized AUM's. Approximately 4% of the allotment is within the potential River Area, which would equate to 281 AUM's of grazing annually.

I. Timber: None of the potential River Area is suitable for timber harvest. No sales have been transacted nor are there any future sales planned. The area has extremely limited fuelwood use and receives very occasional use. The area is open (under permit) for dead and down personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

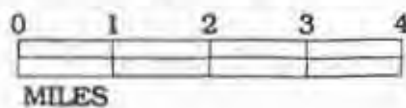
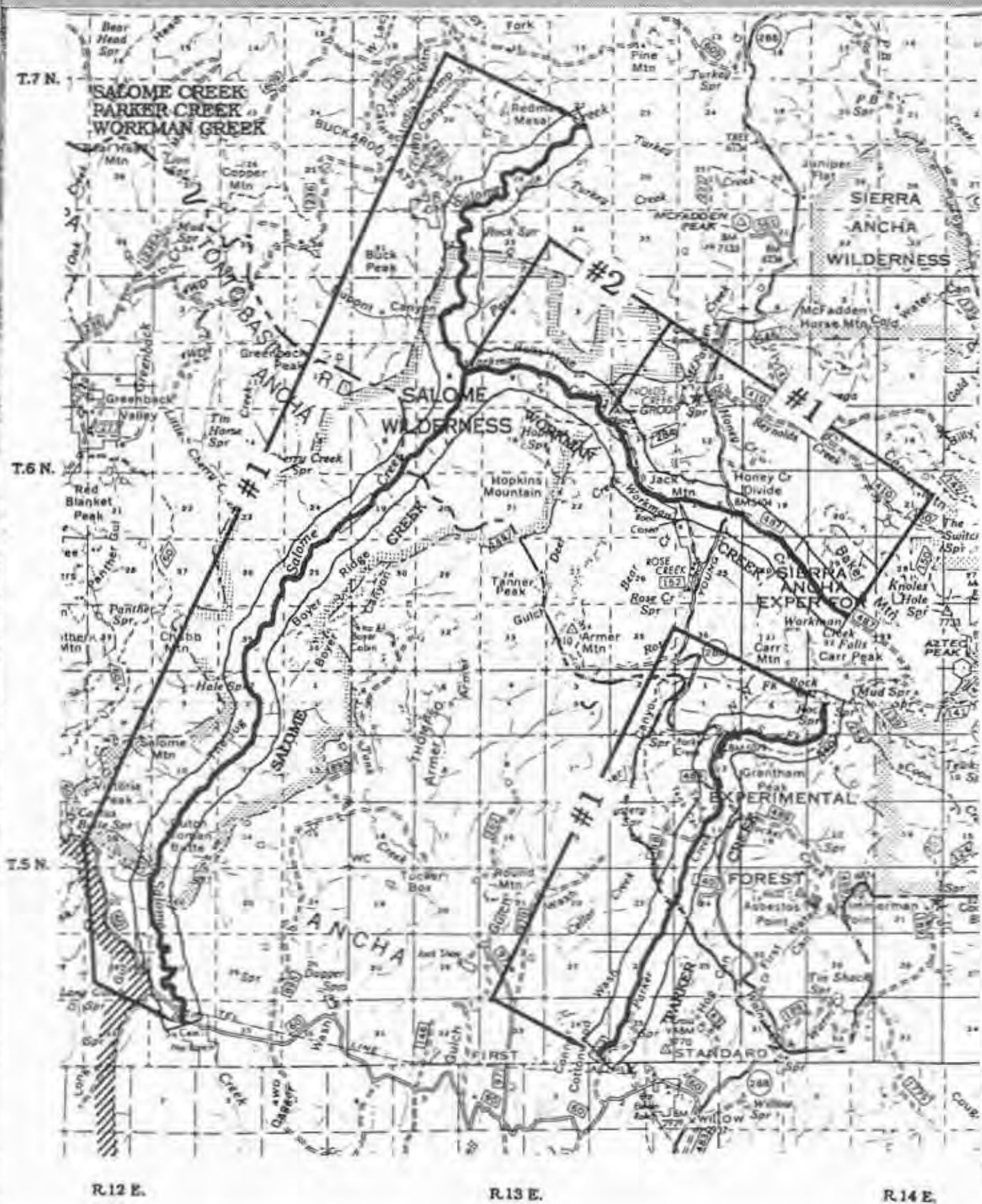
Recreational users derive social benefits from the opportunities for solitude, relaxation, and viewing of scenery and wildlife in an area with preserved unique, natural conditions, while livestock permittees, prospectors, and local land owners derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$12.57 per recreation visitor day. An estimated visitation of 1,500 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$18,855.00 per annum.

Allotment fees for 1993 are \$1.86 per animal unit month for a total of 295 animal unit months, occurring on the allotments within the potential River Area, resulting in \$549.00 per annum in fees being collected by the government. There is no suitable timber for harvest within the potential River Area.

SALOME CREEK

SALOME CREEK



SALOME CREEK

LOCATION

Located in Gila County (Congressional District 5), within the Tonto National Forest, Salome Creek is located west of State Highway 288 and McFadden Peak, and north of Roosevelt Lake. The potential River Area starts at the confluence with Turkey Creek and continues with a southerly flow to Forest Development Road #60 just above Tin Hat Ranch. Topographic terrain offers notable scenery, and a mile-long, 200-foot deep gorge.

Total Creek Length: 26.7 miles

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segment Found Potentially Eligible for Designation:

Approximately 19.6 miles of stream are evaluated for this resource report.
Total acres in potential River Area: 6,270 acres
Percent administered by Forest Service: 100 %

Township	S & Range	12 E	Sections
			2, 10, 11, 14, 15, 16, 21, 22, 27, 28, 34
	6 N	12 E	24, 25, 26, 35, 36
	6 N	13 E	5, 8, 9, 17, 18, 19, 20, 30
	7 N	13 E	21, 22, 27, 28, 29, 32, 33

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Wildlife

D. Classification: Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Salome Creek is located within the Transition Zone at the southern margin of the Colorado Plateau Province of Arizona. The zone is characterized by deeply dissected mountains locally deformed by folds and faults. The creek has incised through sedimentary rocks and intrusive volcanics of Proterozoic age, gravels of Tertiary age, and Quaternary terrace deposits. Local structural and erosional influences have created deep gorges and steep cliffs rising up to 200 feet above the creek.

B. Streamflow and Water Quality: Streamflow is mostly perennial. Median flow is estimated to be approximately 3 cfs.

Water quality data from the Forest Service indicates that Arizona water quality standards are generally met. Turbidity may exceed standards during storm or snowmelt runoff.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. This stream is not rated in the the 1992 Arizona Water Quality Assessment Report. Applicable water quality standards include: warm water Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: Salome Creek has limited riparian vegetation development throughout its length due to its confinement within steep canyon walls. This makes riparian vegetation very susceptible to scouring, and precludes significant deposition of alluvial material for the development of floodplain soils.

Upper Salome Creek is a gorge, with a channel highly confined by rock walls and bedrock. Normal annual flows maintain these sites in a permanent scoured state. Riparian vegetation is very sparse, being limited to scattered stands of sycamore, alder, and willow.

The central portion of Salome Creek, near Boyer Ridge, includes a two mile long reach where the valley wall widens and the channel gradient is lessened. This site supports sycamore stands, described by Brown (1982) as the Sycamore Association. The canopy cover of sycamore varies from sparse to moderate. This section has sustained significant flood-damage, and the channel is badly braided.

Lower Salome Creek supports a burrobrush community. Tree cover is sparse, and includes primarily Goodding willow, Fremont cottonwood, sycamore, and alder. Shrubs dominate the vegetative aspect, and in addition to burrobrush, include desert broom, seepwillow, and desert willow. Herbaceous species are fairly abundant and diverse, including 20 species. Dominant species include mint, bermuda grass, cattail, deergrass, and clammyweed. Burrobrush is an early seral community which occupies newly formed point bars. Past grazing management practices have contributed to limited riparian vegetation development in this portion, but the area is in an upward trend.

D. Fish and Wildlife:

Fisheries: Due to Salome Creek's inaccessibility, fishing pressure is not high and the creek offers only a few rainbow and brown trout that have washed down from streams higher in the watershed. Habitat suitable for Gila roundtail chub is present in the creek.

Wildlife: Game species known to occur within the potential River Area include deer, bear, doves, quail, and collared peccary.

Salome Creek has been identified as having outstandingly remarkable wildlife values. The potential River Area provides moderate to good riparian habitat for a variety of special wildlife species which occur, or may occur, along Salome Creek including:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- candidate
Mexican garter snake	- Endangered
Arizona southwestern toad	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Belted kingfisher	- Candidate
Lowland leopard frog	- Candidate
Common black-hawk	- Candidate
Western red bat	- Candidate

Forest Service sensitive species: Harris' Hawk, loggerhead shrike, costl. and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Preservation within the Salome Wilderness Retention for areas not within the Wilderness
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	A-Distinctive

Salome Creek has been identified as having outstandingly remarkable scenic values. This narrow slot canyon gives little indication that it exists until you are upon it. The canyon winds through the Salome Wilderness and along the base of Dutchwoman Butte. This creek is interrupted by water slide rocks, cascades, deep seasonal pools, and many water falls, including one over thirty feet tall. The deep gorge is so narrow in places, the solid rock walls of each side can be touched with outstretched arms. The narrow shaded canyon walls, in conjunction with the stream, provide a cooler microclimate during the summer months. The sheer, narrow, water smoothed canyon walls create an unusual configuration.

F. Cultural and Historical: There are 12 known sites within the potential River Area (none are on the National Register). Salome Creek has been identified as having outstandingly remarkable cultural values. The few recorded sites in the potential River Area are associated with the Salado Cultural Tradition with an occupation from about AD 1150 - 1400. The largest site, Tuzigoot-on-Salome, is a 150+ room masonry pueblo, occupied from about AD 1250 to 1400. These sites are good examples of upland adaptability and utilization by the Salado people.

LAND USES AND DEVELOPMENTS

A. Land: Salome Creek potential River Area is 19.6 miles in length, and contains approximately 6,270 acres. There are no parcels of private land within it.

Land withdrawals within the potential River Area are:

Salome Wilderness - Approximately 87% of the potential River Area is withdrawn from all forms of Public Land Laws and Mineral Entry

B. Water Rights and Water Resource Developments: One diversion lies on the National Forest within the potential River Area. This diversion, the Hat Ranch Ditch, is located just above the downstream end of the potential River Area and is used to irrigate 14 acres of private land. Diversion capacity is 1 cfs, while maximum irrigation demand is 0.2 cfs. Diversions during low flow can substantially deplete streamflow at the lower end (100 yards) of the potential River Area. Effect on the free-flowing character of the stream is negligible. Small diversions for irrigation of private lands upstream of the potential River Area also exist, but do not affect the free-flowing character of the stream.

C. Transportation Facilities: Vehicle access is provided to the northern edge of the potential River Area by Forest Development Road #2747, a unimproved, natural surface four-wheel-drive road. The majority of this area is within the Salome Wilderness and can be accessed by Forest Service Trails #61 (Jug Trail) and #284 (Hell's Hole) which intersect, but do not follow the creek.

D. Recreation Activities and Facilities: The area is primarily within the Salome Wilderness. There are no developed recreational sites within the potential River Area. Access to the area is limited to dirt roads and hiking trails. Dispersed recreation activities include hiking, water-play, backpacking, picnicking, fishing, and hunting. An estimated 300 recreation visitor days (RVD's) occur within the potential River Area. Commercial activity would be outfitter/guide hunting, fishing, and hiking related services.

E. Special Management Designations: Salome Wilderness - Approximately 87% of the potential River Area is located in the Salome Wilderness (which has a total of 18,530 acres). This Wilderness was established in 1984 and has a major canyon running its entire length. Salome Creek is the most significant physiographic feature within the Salome Wilderness.

F. Mining: There are approximately 5,463 acres of potential River Area withdrawn from mineral entry. The remaining acres are open to mineral entry.

There are approximately 11 existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area, and it is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the area. The northern section (closed to mineral entry) crosses through areas with numerous known mineral deposits and geologically favorable conditions for the occurrence of uranium, copper, and silver. The remaining stream reaches contain few or no known mineral deposits, but consist of geologic terrane favorable for the occurrence of gold and silver. Overall, this area exhibits very low potential for mineral resources.

G. Special Uses:

Special Use Permits issued within the potential River Area are:

US West - telephone line

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential River Area, but there are four allotments within the potential River Area which have approximately one-half mile of fence, six miles of livestock trail, and one spring within the potential River Area.

Dutchwomen Allotment has 2,580 authorized animal unit months (AUM's). Approximately 9% of the allotment is within the potential River Area, which would equate to 232 AUM's of grazing annually.

Greenback Allotment has 5,767 authorized AUM's. Approximately 2% of the allotment is within the potential River Area, which would equate to 115 AUM's of grazing annually.

Arner Mountain Allotment has 2,358 authorized AUM's. Approximately 3% of the allotment is within the potential River Area, which would equate to 71 AUM's of grazing annually.

Buzzard Roost Allotment has 5,334 authorized AUM's. Approximately 6% of the allotment is within the potential River Area, which would equate to 320 AUM's of grazing annually.

I. Timber: None of this area is suitable for timber harvesting. Restrictions within the Salome Wilderness prohibits the removal of fuelwood within its boundary. Areas of potential River Area located outside of the Wilderness boundary are open (under permit) for personal fuelwood gathering of dead and down wood, and dead standing juniper.

SOCIAL AND ECONOMIC VALUES

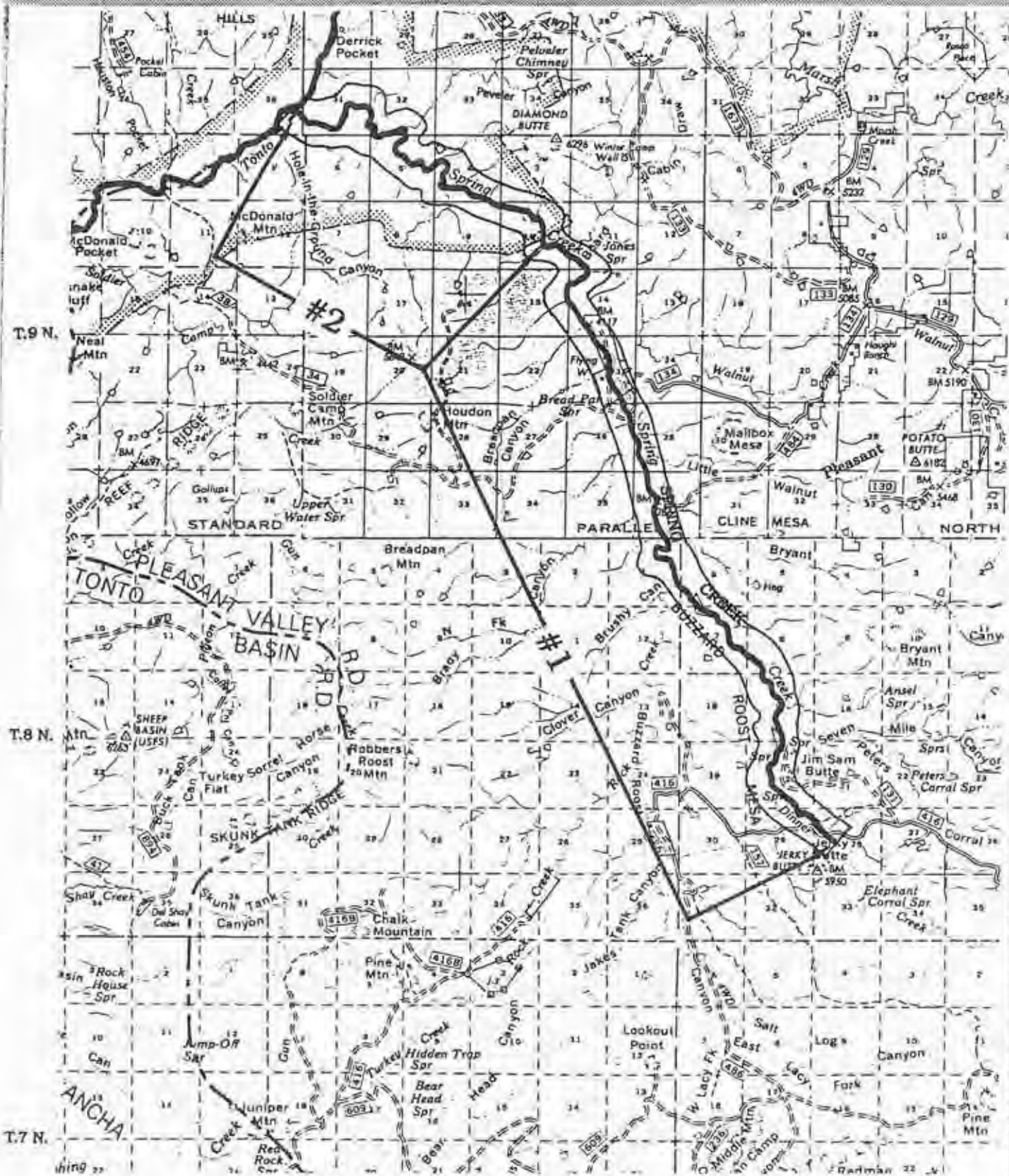
Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for solitude, relaxation, and viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the four livestock permittees and the local land owner derive social benefits from a way of life associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$16.13 per recreation visitor day. An estimated visitation of 900 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$14,517.00 per annum.

Allotment fees are \$1.86 per animal unit month for a total of 738 animal unit months, occurring on the allotments within the potential River Area, resulting in \$1,373.00 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been, mined and marketed from this stream. There is no suitable timber for harvest within the potential River Area, and consequently no economic benefit or revenue collected.

SPRING CREEK

SPRING CREEK



R.12 E.



SPRING CREEK - SEGMENT #1

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Spring Creek is located west of Young, Arizona, and lies between State Highway 87 and 288. Spring Creek is a perennial south to north flowing creek. The creek contains one of the best populations of Gila roundtail chub in the state, while providing excellent riparian habitat in most areas of the creek.

Total Stream Length: 19.4 miles

Segment 1 - 12.4 miles Extends from Forest Development Road #486 to the Hellagate Wilderness.
Segment 2 - 6.4 miles Starts at the boundary of Hellagate Wilderness and continues until it joins Tonto Creek.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Spring Creek Segment #2, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 12.4 miles of stream are evaluated for this resource report.

Total acres in potential River Area, Segment #1: 3,730 acres
Percent administered by Forest Service: 98%

Township	8 N	Range	12 E	Sections	1, 12
	8 S		13 E		6, 7, 8, 17, 18, 20, 21, 28, 29
	9 N		12 E		10, 11, 14, 15, 23, 24, 25, 26, 35, 36

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Fisheries
Riparian
Ecological

D. Classification:

Recreational

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Spring Creek is located within the Transition Zone at the base of the Mogollon Rim and margin of the Colorado Plateau Province of Arizona. The area is characterized by deeply dissected mountains locally deformed by folds and faults. The potential River Area has incised through Proterozoic schists and metamorphic units, and tertiary age gravels, sand and conglomerates.

B. Streamflow and Water Quality: Streamflow is mostly perennial. Median flow is estimated to be approximately 2 cfs.

Water quality data from the Forest Service indicates that Arizona water quality standards are generally met. Turbidity may exceed standards during storm or snowmelt runoff.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. This stream was not rated in the 1992 Arizona Water Quality Assessment Report. Applicable water quality standards include: coldwater Aquatic and Wildlife, Full Body Consumption, Fish Consumption, and Agricultural Livestock Watering.

C. Vegetation: The riparian community in the upper one-half of Segment #1 of the potential River Area supports a healthy, vigorous alder community. This is the Alder Association described by Brown (1982). Alder, Bonpland willow, sycamore, and box elder are dominant species. Sedges and scouring rush are abundant herbaceous components. This riparian community is fairly common on the Tonto National Forest. It has high value for wildlife habitat and recreational uses due to its species and structural diversity.

The riparian community in the lower half of Segment #1 supports both Sycamore and Alder Associations (Brown, 1982). The sycamore community is in the vicinity of the Flying W Ranch. No specific survey data are available. Tree species diversity is high, and includes sycamore, alder, and Bonpland willow as dominants. The channel is braided, and widened. The trend is upward as indicated by an abundance of deergrass and sedges.

D. Fish and Wildlife:

Fisheries: Spring Creek has been identified as having outstandingly remarkable fisheries values as it contains one of the best populations of Gila roundtail chub in the state. The quality of the fish habitat far exceeds any other creek on the Tonto National Forest. The habitat is in excellent condition with stable undercut banks, excellent riparian vegetation in most reaches, and excellent instream cover. The fish habitat is dominated by large, stable pools. The chubs dominate the fish community and are reproducing at a stable rate. The Gila roundtail chub is presently a candidate species on the U.S. Fish and Wildlife Service threatened and endangered species list, but it is expected to be designated as endangered or threatened within the next five to ten years. Through past management decisions, the Forest Service has indicated that it is committed to the continued existence of this population of Gila roundtail chub.

Wildlife: Game species known to occur within the potential River Area include deer, elk, bear, quail, wild turkey, and tree squirrels. Riparian habitat is excellent. Special wildlife species occurring along Segment #1 may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Mexican spotted owl - Threatened

Arizona State Threatened and Endangered species:

Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
Northern goshawk	- Candidate
Northern leopard frog	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species:

Flammulated owl,

E. Visual Resources:

Visual Quality Objective:	Retention
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	A-Distinctive

Cilae Mesa is a prominent scenic landmark seen from the stream. Rock formations (where Brusby Canyon enters) requires hikers to walk through the creek since the terrain does not permit construction of a trail. As the creek heads north near Flying W, the valley side-walls become steep, and the valley floor broadens. Vegetation tends to be in the transition zone of juniper/pooderosa pine on the canyon tops and walls. The south end of the creek has outstandingly remarkable riparian vegetation which includes alder and columbine, with the tree canopy covering the stream in many places.

F. Cultural and Historical: There are no prehistoric or historical sites known to occur within Segment #1 of the potential River Area.

LAND USES AND DEVELOPMENTS

A. Land: Segment #1 of the potential River Area is 12.4 miles in length and contains approximately 3,730 acres. There are three parcels of private land within this segment.
3,664 acres (98%) National Forest
66 acres (2%) private land:

26 acres in sec. 17 & 20 T. 8 N., R. 13 E.
40 acres in sec. 23 T. 9 N., R. 12 E.

There is no land withdrawn within Segment #1 of the potential River Area.

B. Water Rights and Water Resource Developments: No diversions/dams exist on the National Forest, or on private lands, within or above Segment #1.

C. Transportation Facilities: Segment #1 of the potential River Area can be accessed by several unimproved dirt roads. Forest Development Road #131 provides access to the Spring Creek Ranch. Forest Development Road #134 provides access to the Flying W Ranch, and Forest Development Road #484 allows for access of the creek near Cline Mesa. Only Forest Development Road #134 crosses the creek, and it is an unimproved ford.

D. Recreation Activities and Facilities: There are no developed recreation facilities within Segment #1. Dispersed recreation activities include cross-country hiking, backpacking, hunting, and picnicking. Direct access to the potential River Area is gained by dirt roads, and foot/horse travel. An estimated 200 recreation visitor days (RVD's) occur within this segment. Commercial activity consists of outfitter/guide hunting and hiking related services.

E. Special Management Designations: None occur within Segment #1 of the potential River Area.

F. Mining: None of Segment #1 of the potential River Area has been withdrawn from mineral entry. All acreage remains open to mineral entry.

There are approximately 22 existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with Segment #1.

There are no oil or gas leases within this segment, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the segment. The potential River Area extends through both the Bread Pan and the Spring Creek Mineral Districts. The Bread Pan District recorded production of beryllium and niobium. Records of the Spring Creek District indicated production of approximately 6,000 pounds of copper, 18,000 pounds of lead, 200 ounces of gold, 2,000 ounces of silver, and 8 tons of tungsten during the period of 1926 to 1945. Geologic terrane exhibits conditions favorable for occurrence of uranium, but there are no known deposits.

G. Special Uses: Special Use Permits issued within the potential River Area are for various outfitter/guide-related services for hunting and hiking.

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment #1 of the potential River Area, but it has four grazing allotments plus the Heber-Reno Sheep Driveway established within it. The allotments have approximately eight miles of fence, two corrals, and two wells within this segment.

The Heber-Reno Sheep Driveway currently provides passage for 4,000 sheep for a six-day period each year, which equates to 160 AUM's.

Soldier Camp Allotment has 6,908 authorized animal unit months (AUM's). Approximately 6% of the allotment is within Segment #1, which would equate to 414 AUM's of grazing annually.

Diamond Butte Allotment has 4,650 authorized AUM's. Approximately 0.4% of the allotment is within the potential River Area, which would equate to 19 AUM's of grazing annually.

Spring Creek Allotment has 408 authorized AUM's. Approximately 18% of the allotment is within the potential River Area, however no grazing is authorized on this allotment at this time.

Buzzard Roost Allotment has 5,334 authorized AUM's. Approximately 0.5% of the allotment is within the potential River Area, which would equate to 27 AUM's of grazing annually.

I. Timber: None of Segment #1 is suitable for timber harvest. No sales have been transacted nor are there any future sales planned. This segment has limited fuelwood use due to location and access. Future fuelwood sales could possibly take place. The area is presently open (under permit) to dead and down wood, and dead standing juniper for personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefit them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for solitude, relaxation, and viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the five livestock permittees and local land owners derive social benefits from a way of life associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$11.65 per recreation visitor day. An estimated visitation of 200 recreation visitor days occurred within Segment #1 of the potential River Area resulting in a total economic value of \$2,290.00 per annum.

Allotment fees are \$1.85 per animal unit month for a total of 620 animal unit months, occurring on the allotments and the sheep driveway within this segment, resulting in \$1,153.00 per annum in fees being collected by the government. There is no suitable timber to harvest.

SPRING CREEK
Segment #2

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest. Spring Creek is located approximately seven miles west of Young, Arizona, and lies between State Highways 87 and 288. Spring Creek is a perennial south-to-north flowing creek, which contains one of the best population of Gila roundtail chub in the State, and which provides excellent riparian habitat in most areas of the creek.

Total Stream Length: 20.4 miles

Segment 1 - 12.4 miles From Forest Development Road #414 to the Hellgate Wilderness.
Segment 2 - 6.4 miles From the boundary of Hellgate Wilderness to its confluence with Tonto Creek.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Spring Creek Segment #1, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 6.4 miles of stream are evaluated for this resource report.
Total acres in potential River Area, Segment #2: 1,820 acres
Percent administered by Forest Service: 100 %

Township	9 N	Range	11 E	Sections	1
	9 N		12 E		3, 4, 5, 6, 9, 10
	10 N		11 E		36
	10 N		12 E		31, 32

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Fisheries
Riparian
Ecological

D. Classification:

Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology - Spring Creek is located within the Transition Zone at the base of the Mogollon Rim and margin of the Colorado Plateau Province of Arizona. The area is characterized by deeply dissected mountains locally deformed by folds and faults. The potential River Area narrows at the confluence with Tonto Creek forming a gorge with steep slopes and cliffs rising over 1,000 feet above the creek. Units exposed within this canyon include Proterozoic volcanic and sedimentary rocks which have been structurally and metamorphically altered. Spring Creek offers exposure of these rock units not readily visible in other areas of the region.

B. Streamflow and Water Quality:

Streamflow is mostly perennial. Median flow is estimated to be approximately 2 cfs.

Water quality data from the Forest Service indicates that Arizona water quality standards are generally met. Turbidity may exceed standards during storm or snowmelt runoff.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. This stream was not rated in the 1992 Arizona Water Quality Assessment Report. Applicable water quality standards include: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, and Agricultural Livestock Watering.

C. Vegetation - Segment #2 of the potential River Area has limited riparian vegetation development, due to extreme confinement within steep, canyon walls. This makes riparian vegetation susceptible to scouring, and precludes significant deposition of alluvial material for the development of floodplain soils. The Forest Service has no site-specific riparian survey data, but the National Wetlands Inventory documents that riparian cover is consistently less than 30%; probably consisting of a few, scattered riparian tree species.

D. Fish and Wildlife:

Fisheries: Spring Creek has been identified as having outstandingly remarkable fisheries values as it contains one of the best populations of Gila roundtail chub in the state. The quality of the fish habitat far exceeds any other creek on the Tonto National Forest. The habitat is in excellent condition with stable undercut banks, excellent riparian vegetation in most reaches, and excellent instream cover. The fish habitat is dominated by large, stable pools. The chubs dominate the fish community and are reproducing at a stable rate. Presently the Gila roundtail chub is a candidate species on the U.S. Fish and Wildlife Service threatened and endangered species list, but it is expected to be designated as a threatened or endangered species within the next five to ten years. Through past management decisions, the Forest Service has indicated that it is committed to the continued existence of this population of Gila roundtail chub.

Wildlife: Game species known to occur within Segment #2 include deer, elk, bear, quail, wild turkey, and tree squirrels. Special wildlife species occurring along the Spring Creek Segment #2 may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Mexican spotted owl - Threatened

Arizona State Threatened and Endangered species:

Lowland leopard frog - Candidate
Belted kingfisher - Candidate
Northern goshawk - Candidate
Northern leopard frog - Candidate
Common black-hawk - Candidate

Forest Service sensitive species: Flammulated owl.

E. Visual Resources:

Visual Quality Objective: Preservation
Character Type: Tonto
Character Subtype: Upper Tonto
Variety Class: A-Distinctive

The Spring Creek Canyon narrows at its confluence with Tonto Creek forming a spectacular gorge with steep cliffs rising above the creeks. Unique rock formations are exposed, and the stream offers a wide variety of visual pleasures.

F. Cultural and Historical - There are no prehistoric or historical sites known to occur within Segment #2 of the potential River Area.

LAND USES AND DEVELOPMENTS

A. Land - Segment #2 of the potential River Area is 6.4 miles in length and contains approximately 1,820 acres. There are no parcels of private land within this Segment.

This entire segment of the potential River Area has been withdrawn from mineral entry, as part of the Hellsgate Wilderness.

B. Water Rights and Water Resource Developments - No diversions/dams exist.

C. Transportation Facilities - There are no Forest System roads or trails that provide direct access to this segment.

D. Recreation Activities and Facilities - Segment #2 is entirely within the Hellsgate Wilderness. There are no developed recreation facilities. Dispersed recreation activities include cross-country hiking, backpacking, fishing, and hunting. Primary access is gained by foot or horse travel. An estimated 50 recreation visitor days (RVD's) occur within Segment #2 of the potential River Area. Commercial activity consists of outfitter/guide hunting and hiking related services on a Forest-wide basis.

E. Special Management Designations - The Hellsgate Wilderness (containing 37,440 acres) was established in 1954, and is composed of rough terrain with a major canyon and perennial stream extending its entire length. Spring Creek, along with Tonto Creek, are the most important physiographic features of the Hellsgate Wilderness.

F. Mining - All of Segment #2 of the potential River Area is withdrawn from mineral entry.

There are no existing claims within Segment #2 of the potential River Area (Bureau of Land Management, May 10, 1993).

There are no oil or gas leases within this segment, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the segment. The potential River Area extends across areas of few known mineral deposits, but geologic conditions may suggest possible occurrences of gold, silver, copper, and uranium. A deposit of the rare-earth element xenotime is present near Diamond Butte, which is outside the Wilderness. Overall, Segment #2 of the potential River Area exhibits low mineral resource potential.

G. Special Uses - Various Special Use Permits have been issued within this segment for outfitter/guide related services for hunting and hiking.

H. Livestock Grazing and Agriculture - No agriculture occurs within Segment #2 of the potential River Area, but two grazing allotments are established within it. The allotments have approximately eight miles of fence, two corrals, and two wells within this segment.

Soldier Camp Allotment has 6,908 authorized animal unit months (AUM's). Approximately 31 of the allotment is within Segment #2, which would equate to 207 AUM's of grazing annually.

Diamond Butte Allotment has 4,650 authorized AUM's. Approximately 41 of the allotment is within Segment #2, which would equate to 186 AUM's of grazing annually.

I. Timber - No sales have been transacted nor are there any future sales planned. The entire segment is located within the Hellsgate Wilderness, and is not suitable for timber harvest.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

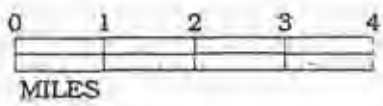
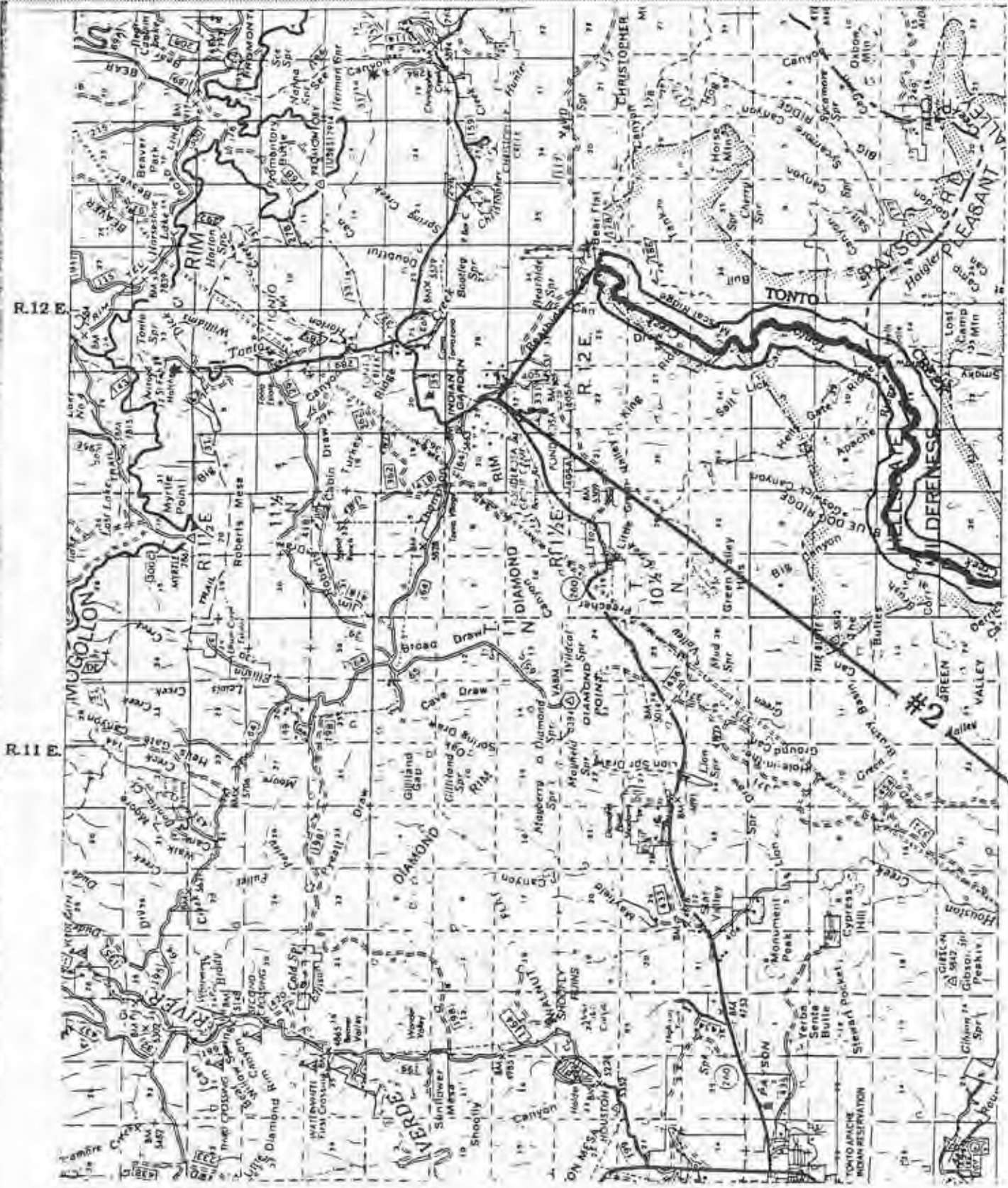
Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the two livestock permittees derive social benefits from the opportunity to enjoy a way of life associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$18.89 per recreation visitor day. An estimated visitation of 50 recreation visitor days occurred within Segment #2 of the potential River Area resulting in a total economic value of \$944.50 per annum.

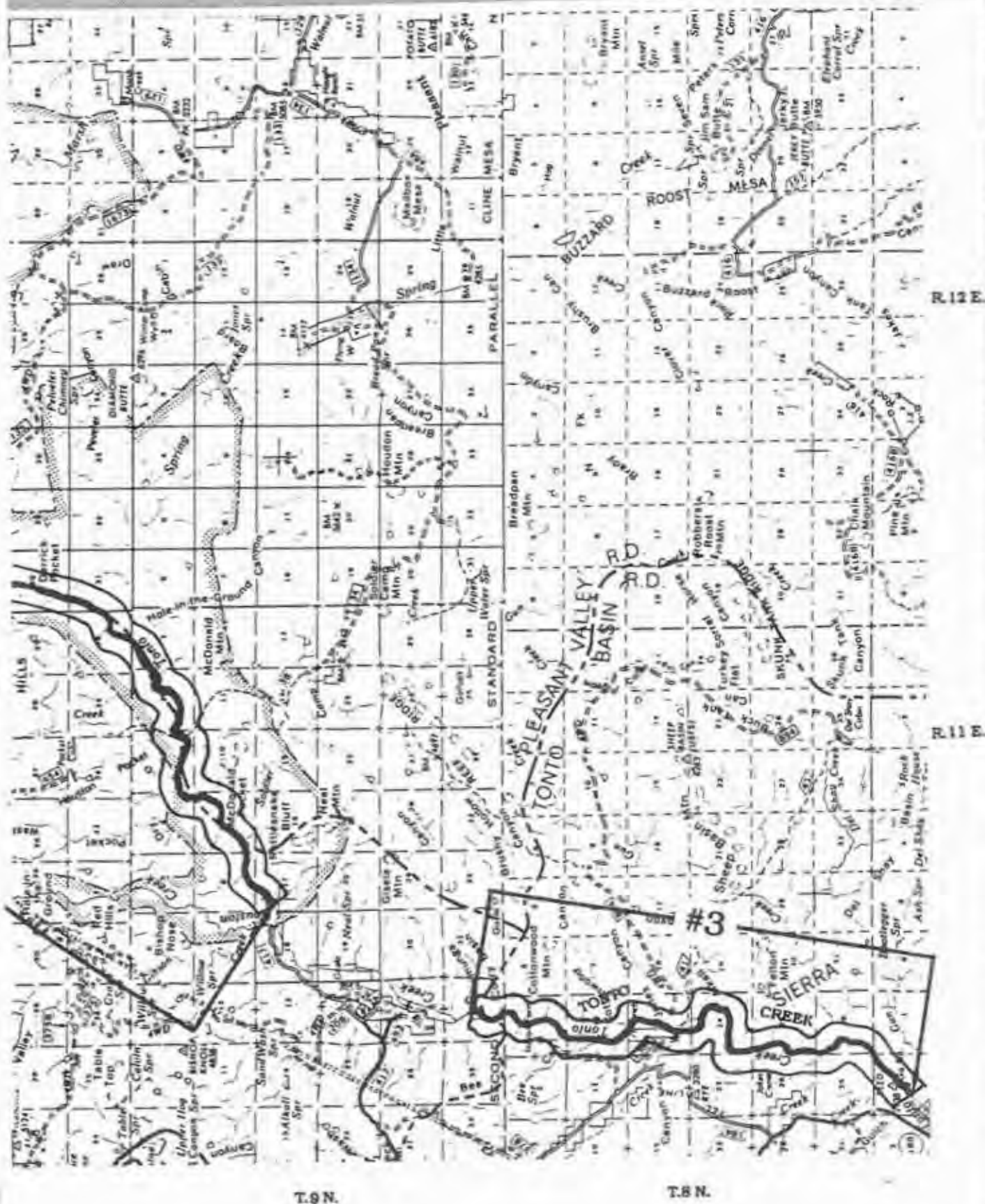
Allotment fees are \$1.86 per animal unit month for a total of 393 animal unit months, occurring on the allotments within this segment, resulting in \$731.00 per annum in fees being collected by the government. There is no indication that valuable minerals are mined and marketed from this Segment of the potential River Area, nor is there any suitable timber to harvest.

TONTO CREEK

TONTO CREEK



TONTO CREEK



TONTO CREEK
Segment #2

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Tonto Creek's headwaters are above the Mogollon Rim approximately 10 miles northeast of the town of Payson, Arizona. Tonto Creek traverses the Hellsgate Wilderness, flowing through some of the most rugged, diverse terrain found on the Tonto National Forest. It then flows through Tonto Basin and into Roosevelt Lake.

Total Stream Length: 62.9 miles

Segment 1 - 6.4 miles Found not potentially eligible for designation.

Segment 2 - 21.5 miles From the north boundary of Hellsgate Wilderness to the south boundary of Hellsgate Wilderness.

Segment 3 - 9.1 miles From the south of Coconunga Creek to the south of Gun Creek.

Note: The remaining miles of this stream have also been found not to be potentially eligible.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Segment #3, see that resource report).

A. Segment Found Potentially Eligible for Designation:

Approximately 21.5 miles of stream are evaluated for this resource report.

Total acres in potential River Area (Segment #2): 6,500 acres

Percent administered by Forest Service: 100 %

Township	9 N	Range	11 E	Sections	1, 2, 3, 4, 8, 9, 10, 11, 16, 17, 18
	10 N		11 E		25, 36
	10 N		12 E		2, 8, 10, 11, 14, 15, 16, 17, 18,
					19, 20, 30, 31
	10 1/2 N		12 E		23, 24, 25, 26, 34, 35

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Geological
Fish and Wildlife
Riparian

D. Classification:

Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The potential River Area is located within the Transition Zone at the base of the Mogollon Rim and margin of the Colorado Plateau Province of Arizona. This rugged drainage is deeply incised with altitudes ranging from 3,000 feet in the lower gorges to 6,000 feet in the hills above the upper gorges, local relief commonly greater than 1,000 feet. Units exposed within these canyons include structurally and metamorphically altered Proterozoic volcanic, plutonic, and sedimentary rocks. These units are approximately 1.7 billion years old and represent part of a great volcanic complex which extended regionally in nature. Structural and erosional events have created extraordinary cliffs and narrow canyon gorges which constitute an outstandingly remarkable value.

B. Streamflow and Water Quality Streamflow is perennial; median flow is estimated to be approximately 20 cfs.

Water quality data from Arizona Department of Environmental Quality indicates that Arizona water quality standards are generally met. Phosphate samples exceed levels permitted by the National Pollution Discharge Elimination System permit issued to Arizona Game and Fish Department Hatchery, located approximately seven miles above the beginning of the segment.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment indicates the potential River Area partially supports its designated uses of: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation - The Tonto Creek potential River Area has very little riparian vegetation throughout the reach, due to its confinement within steep canyon walls. This makes riparian vegetation very susceptible to scouring from floods, and precludes significant deposition of alluvial material for the development of floodplain soils.

The Forest Service has not completed a specific riparian inventory for the potential River Area, but the National Wetlands Inventory maps indicate that no areas occur which have a total vegetation canopy of 30% or more. The stream area is essentially unvegetated channel and stream bottom, with a few isolated plants, however several side-drainages contain small areas of riparian vegetation.

Tonto Creek Segment #2 has been identified as having outstandingly remarkable riparian values. The Arizona agave (listed as an endangered plant species by the U.S. Fish and Wildlife Service) and the Tonto Basin agave (listed as a candidate species on the U.S. Fish and Wildlife Service) and the Sierra Ancha fleabane (a Forest Service sensitive species) are known to occur just outside of the potential River Area, and some habitat found within this segment is suitable for the occurrence of these plant species.

D. Fish and Wildlife:

Fisheries: Tonto Creek has been identified as having an outstandingly remarkable fishery value. Segment #2 supports an outstanding population of Gila roundtail chub. The habitat is dominated by large, rockbound pools within deep gorges; the chubs are the most common fish in the system and appear to be reproducing at a stable rate. The Gila roundtail chub is presently listed as a candidate species on the U.S. Fish and Wildlife Service's threatened and endangered species list, but it is expected that within the next five to ten years that it will be designated as threatened or endangered. Through past management decisions, the Forest Service has indicated that it is committed to the continued existence of this population of Gila roundtail chub. In addition, Tonto Creek supports populations of rainbow trout, desert sucker, and Sonora sucker.

Wildlife: Game species known to occur within this segment of the potential River Area include deer, elk, band-tailed pigeon, quail, dove, rabbits, bear, collared peccary, mountain lion, and tree squirrels.

Habitat for the goshawk, parrot, flammulated, and spotted owl occurs in the upper part of this segment near Bear Flat, while the black-hawk may be found in riparian areas along the segment. The remaining species may occur throughout the segment.

The potential River Area has been identified as having outstanding wildlife values. Three Federal Endangered Species, one Federal Threatened species, and one State Threatened species are found here. The special wildlife species along Tonto Creek may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Thick-billed parrot	- Endangered
Peregrine falcon	- Endangered
Mexican spotted owl	- Threatened
Southwestern willow flycatcher	- Proposed endangered
Southwestern cave myotis	- Candidate
Yavapai leopard frog	- Candidate
Narrowheaded garter snake	- Candidate
Arizona southwestern toad	- Candidate
Maricopa tiger beetle	- Candidate
Spotted bat	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Northern goshawk	- Candidate
Common black-hawk	- Candidate
Belted kingfisher	- Candidate

Forest Service sensitive species: Flammulated owl.

E. Visual Resources:

Visual Quality Objective:	Preservation
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	N/A

This creek has outstandingly remarkable scenic values as it flows through the Hellsgate Wilderness. The narrow, deep distinctive canyon walls contain many deep pools that require the hikers to swim, since few trails exist. The north end of the creek at Bear Flat has a stand of Ponderosa Pine, while the south end of the creek terminates in chaparral/creosote, with areas in between with riparian deciduous vegetation. The remoteness, limited access, and scenic quality of this creek combine to create a true wilderness experience.

F. Cultural and Historical - There are no known sites within the potential River Area.

LAND USES AND DEVELOPMENTS

A. Land - Segment #2 of the potential River Area is 21.5 miles in length, contains approximately 6,500 acres, and has no parcels of private land.

Land withdrawals within the entire potential River Area are: Hellsgate Wilderness

B. Water Rights and Water Resource Developments: No diversions/dams exist on the National Forest within the potential River Area. The U.S. Geological Survey has a water gage station located at the lower tip of the segment.

C. Transportation Facilities: Segment #2 of the potential River Area is not accessible by road. Two Forest System Trails intersect the creek, but do not follow the it.

D. Recreation Activities and Facilities: Segment #2 is entirely within Hellsgate Wilderness. There are no developed sites or facilities. The area is in the proximity of the town of Payson and State Highway 260, but primary access is limited to dirt roads and trails. Dispersed activities include hiking, backpacking, fishing, hunting, and wildlife watching. Two Forest System Trails (Hellsgate Trail 37, and Pocket Trail 38) cross through the area. An estimated 500 recreation visitor days occur within this segment. Commercial activities include outfitter/guide hunting, fishing, and hiking related services on a Forest-wide basis.

E. Special Management Designations - Hellsgate Wilderness: Approximately 97% of Segment #2 of the potential River Area is contained within Hellsgate Wilderness. This wilderness was established in 1984 and is comprised of rough terrain with a major canyon and perennial stream extending its entire length. It has a total of 37,330 acres.

F. Mining - Approximately 97% of Segment #2 is withdrawn from mineral entry.

There are no existing mining claims identified (Bureau of Land Management, May 10, 1993) within sections associated with this segment of the potential River Area, and there are no oil or gas leases within it. Tonto Creek Segment #2 is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries. There is no history of mining or mineral production within this segment. Portions of the Green Valley and Spring Creek Mineral Districts extend into the segment, however none of the recorded mineral production is attributed to the area. Within a five-mile radius, occurrences of agate, amethyst, barite, beryllium, copper, gold, lead, rare-earth mineral xenotime, silver and uranium have been identified. No localities of gold have been noted within the potential River Area (which is closed to mineral entry), however, geological features suggest conditions which may possibly be favorable for its occurrence within this segment.

G. Special Uses:

Special Use Permits issued within the potential River Area are:
U.S. Geological Survey - stream gaging station

B. Livestock Grazing and Agriculture: No agriculture occurs within Segment #2 which, has five grazing allotments established within it. The allotments have short segments of fences within the potential River Area.

Green Valley/Indian Gardens Allotment has 3,730 authorized animal unit months (AUM's). Approximately 3% of the allotment is within Segment #2, which would equate to 112 AUM's of grazing annually.

Christopher Mountain/Ellinwood Allotment has 2,400 authorized AUM's. Approximately 3% of the allotment is within Segment #2, which would equate to 72 AUM's of grazing annually.

Star Valley Allotment has 2,232 + NI authorized AUM's. Approximately 7% of the allotment is within Segment #2, which would equate to 156 AUM's of grazing annually.

Gisele Allotment has 2,280 authorized AUM's. Approximately 2% of the allotment is within Segment #2, which would equate to 46 AUM's of grazing annually.

Soldier Camp Allotment has 6,908 authorized AUM's. Approximately 2% of the allotment is within Segment #2, which would equate to 138 AUM's of grazing annually.

I. Timber - Segment #2 of the potential River Area is located almost entirely within the Hellsgate Wilderness, and as such is unsuitable for timber harvest.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery, and wildlife in an area with preserved unique, natural conditions, while the five livestock permittees derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$18.89 per recreation visitor day. An estimated visitation of 500 recreation visitor days occurred within Segment #2, resulting in a total economic value of \$9,445.00 per annum.

Allotment fees for 1993 are \$1.86 per animal unit month for a total of 524 animal unit months, occurring on the allotments within Segment #2, resulting in \$974.00 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been, mined and marketed from the potential River Area and there is no suitable timber within this segment.

TONTO CREEK
Segment #3

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Tonto Creek's headwaters are above the Mogollon Rim approximately 10 miles northeast of the town of Payson, Arizona. Tonto Creek traverses the Hellsgate Wilderness and then flows through Tonto Basin and into Roosevelt Lake. Segment #3 is located north of "Punkin Center".

Total Stream Length: 62.9 miles

Segment 1 - 6.4 miles Found not potentially eligible for designation

Segment 2 - 21.5 miles From the northern boundary of Hellsgate Wilderness to the southern boundary of Hellsgate Wilderness.

Segment 3 - 9.1 miles From the mouth of Coromanga Creek to the mouth of Gun Creek

Note: All other reaches of this stream were also evaluated, and found not to be potentially eligible.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segment Found Potentially Eligible for Designation:

Approximately 9.1 miles of stream are evaluated for this resource report.

Total acres in potential River Area (Segment #3): 2,600 acres

Percent administered by Forest Service: 97 %

Township	7 N Range	10 E Sections	1, 2
	8 N	10 E	1, 2, 11, 12, 13, 23, 24, 25, 26, 35, 36
	8 N	11 E	19
	9 N	10 E	36

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Wildlife
Riparian
Ecological

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The potential River Area is located within the Transition Zone at the base of the Mogollon Rim and margin of the Colorado Plateau Province of Arizona. The zone is characterized by mountainous terrain and narrow, shallow basins. This segment of the Creek has incised through schists and metamorphic units of Proterozoic age. Tertiary volcanics including tuffs interbedded with sand, gravel, and conglomerate, and Quaternary talus, alluvium, and terrace deposits.

B. Streamflow and Water Quality:

Streamflow is mostly perennial. Median flow is estimated to be approximately 24 cfs as gauged by a U.S. Geological Survey gauge just below the end of the potential River Area.

Water quality data from Arizona Department of Environmental Quality indicates that Arizona water quality standards are generally met.

As required by Arizona Revised Statute 49-22.1D, water quality standards are expressed in terms of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment indicates the potential River Area is in not-support of its designated uses because of violations of standards for dissolved oxygen, turbidity and phosphorous in 1990, and violations of standards for ammonia and turbidity in 1988-89. The Dude Fire is identified as a potential source of turbidity. Designated uses identified for Tonto Creek are: coldwater Aquatic and Wildlife, Full Body Contact, Fish consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation:

Segment #3 of Tonto Creek has been identified as having outstandingly remarkable riparian and ecological values. A detailed survey was completed in section 25 by the Forest Service and found to have very high riparian value. Much of this segment is dominated by the cottonwood-willow community. This community has been frequently scoured by major floods during the past decade, maintaining it in an early seral (sapling and pole) stage. Dominant species include Fremont cottonwood, Goodding willow, and sycamore. Ash and alder are also present. Very few mature or old age class trees are present. The flood during the winter of 1992/93 caused further losses of the young cottonwood/willow plants, but seedlings are very abundant and a rapid recovery response is expected. The herbaceous component is highly significant, and includes many important wetland species such as knotgrass, hardstem bulrush, cattail, scouring rush, plus other sedge and rush species. This community was described by Brown (1982) as the Fremont Cottonwood-Goodding Willow Association. It is the rarest riparian community on both the Tonto National Forest and in Arizona as well.

Segment #3 also includes scrub-shrub communities, especially on point bars. Common species include deepwillow, burrobrush, and desert broom. This represents a very early seral community on newly disturbed sites. This is a very common riparian community on the Tonto National Forest.

D. Fish and Wildlife:

Fisheries: Segment #3 of Tonto Creek contains many Gila roundtail chub and other warmwater fish species. In addition, Gila chub have been found in this segment, however most of the chubs have been found in only a small section of Segment #3. The Gila roundtail chub is presently listed as a candidate species on the U.S. Fish and Wildlife Service's threatened and endangered species list, but it is expected that within the next five to ten years that it will be designated as threatened or endangered.

Wildlife: Game species known to occur within Segment #3 include deer, quail, dove, rabbits, bear, and collared peccary.

This segment has been identified as having outstanding wildlife value. It provides extremely important habitat for bald eagle nesting and foraging. Special wildlife species which are known to occur along Tonto Creek Segment #3 may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Maricopa tiger beetle	- Candidate
Yavapai leopard frog	- Candidate
Spotted bat	- Candidate
Southwestern cave myotis	- Candidate

Arizona State Threatened and Endangered species:

Common black-hawk	- Candidate
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E. Visual Resources:

Visual Quality Objective:	Retention for the south third of the segment Partial Retention for the remaining north portion of the segment
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive

This perennial stream in the Sonoran Desert, with its deciduous riparian vegetation patterns, offers visual relief from the surrounding interior chaparral, bush-bursage creosote. Terrain is moderately varied with broad slopes frequently dissected by shallow canyons and arroyos.

F. Cultural and Historical:

There are no known sites within this segment.

LAND USES AND DEVELOPMENTS

A. Land: Segment #3 is 9.1 miles in length and contains approximately 2,800 acres. It has one parcel of private land within it.

2,722 acres (97%) National Forest

78 acres (3%) private land: sec. 13, T. 8 N., R. 10 E.

No land has been withdrawn from entry within Segment #3.

B. Water Rights and Water Resource Developments: One small diversion, the Neal Ditch, exists within Segment #3. The ditch is used to irrigate about five acres of private land. The effect on the free-flowing character of the segment is negligible. One large diversion, the Gisela Ditch, diverts water to irrigate about 145 acres of land between Tonto Creek Segment #2 and Tonto Creek Segment #3. The diversion is typically constructed by bull-dozing a dike across the Tonto Creek channel. The diversion structure can divert most of the flow in Tonto Creek during the low-flow periods. Diversions can have a major effect on flow in Segment #3, but do not physically affect its free-flowing character. The U.S. Geological Survey operates a streamflow gage at the lower end of the segment, but it does not affect the free-flowing character of the reach.

C. Transportation Facilities: Access to the south end of this Segment is provided by Forest Development Road #1390, an open, natural surfaced, high-clearance-vehicle road. Approximately six miles north of Forest Development Road #1390, Forest Development Road #3414 intersects and crosses the creek. This crossing is unimproved. Access to private land along the creek (the Seventy Six Ranch) is provided by Roads #1387 and #1446; these roads provide access to, but do not cross the creek. There are no system roads or trails providing access to the creek from the Seventy Six Ranch north to the segment's northern boundary.

D. Recreation Activities and Facilities: There are no developed sites or facilities within Segment #3. The area is south of the settlement of Gisela and east of State Highway 87. Primary access is limited to dirt roads, and foot and horse travel. Dispersed activities include cross-country hiking, backpacking, fishing, hunting, limited white water boating, and wildlife watching. An estimated 500 recreation visitor days (RVD's) occur within this segment. Commercial activities include outfitter/guide hunting, fishing, and hiking-related services on a Forest-wide basis.

E. Special Management Designations: None occur within Segment #3 of the potential River Area.

F. Mining: None of Segment #3 is withdrawn from mineral entry; all acreage remains open to mineral entry.

There is approximately one existing claim which has been identified (Bureau of Land Management, May 10, 1993) within sections associated with Segment #3.

There are no oil or gas leases within this segment, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries in the segment. Geologic terrain is favorable for the occurrence of copper deposits, but no known deposits have been located.

G. Special Uses:

Special Use Permits issued within this segment:

US West	Telephone line
Arizona Power Service	21.5 KV powerline
	Transmission line
U.S. Department of Interior	Gauging station
Salt River Project	Gauging station

Various outfitter/guide white-water rafting, hunting, fishing, and hiking-related services.

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment #3, which has three grazing allotments established within it. The allotments have 7.5 miles of fence, one trough, one stock tank, and five miles of livestock trail within this segment.

75 Allotment has 4,344 authorized animal unit months (AUM's). Approximately 81% of the allotment is within this segment, which would equate to 347 AUM's of grazing annually.

Del Shay Allotment has 2,154 authorized AUM's. Approximately 0.6% of the allotment is within the segment, which would equate to 13 AUM's of grazing annually.

Hardt Creek Allotment has no authorized AUM's, as it is currently under a non-use agreement.

Gisela Allotment has 2,280 authorized AUM's. Approximately 0.3% of the allotment is within Segment which would equate to 7 AUM's of grazing annually.

I. Timber: No sales have been transacted, nor are there any future sales planned; it is all unsuitable for timber harvest. There is limited fuelwood use within Segment #3 due to availability, location, and access, but the segment is open, under permit, for personal fuelwood gathering of dead and down.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the four livestock permittees and the local land owner derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$10.49 per recreation visitor day. An estimated visitation of 500 recreation visitor days occurred within this segment resulting in a total economic value of \$5,245.00 per annum.

Allotment fees for 1993 are \$1.86 per animal unit month with a total of 367 animal unit months occurring on the allotments within this segment resulting in \$683.00 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been, mined and marketed from Segment #3. None of this Segment is suitable for timber harvest. No sales have been transacted nor are there any future sales planned. The river segment receives limited fuelwood use, but is open, (under permit) for dead and down personal fuelwood gathering.

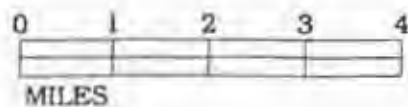
UPPER SALT RIVER

UPPER SALT RIVER

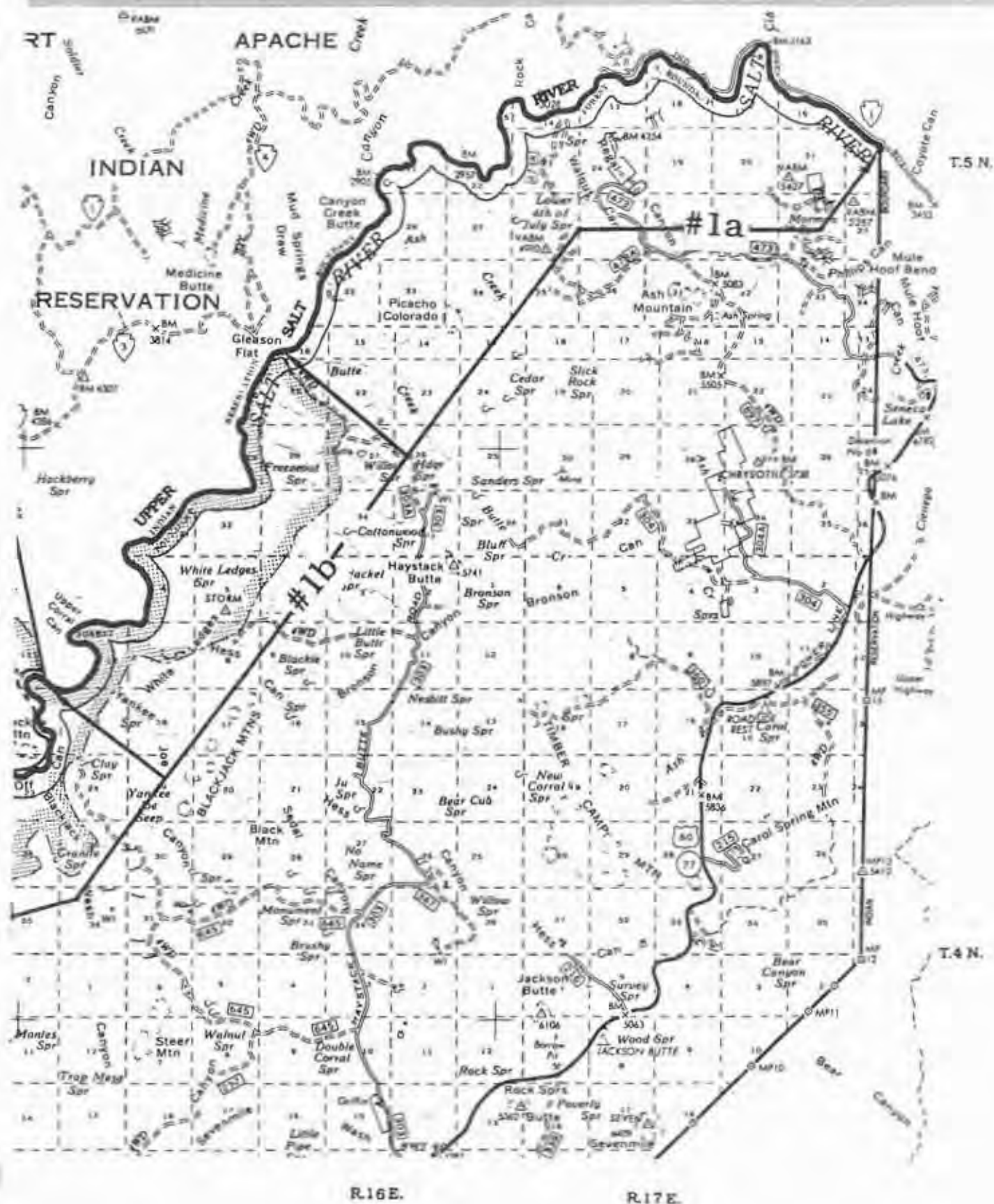


R.14 E.

R.15 E.



UPPER SALT RIVER



UPPER SALT RIVER

Segment 1-a

LOCATION

Located in Gila County (Congressional District 6), and partially within the Tonto National Forest, the Upper Salt River begins at the confluence of the Black and White Rivers. It flows westerly into Roosevelt Reservoir. It is located east of State Highway 288 and north of the town of Globe, Arizona. Segments 2-a/2-b (32.2 miles) of the Upper Salt River are totally within the Tonto National Forest, while in Segment 1-a/1-b (24.3 miles) the middle of the river forms the boundary between the Fort Apache Indian Reservation and the Tonto National Forest (which is river-left). The Upper Salt River is a nationally-known white-water river, flowing through spectacular canyons.

Total River Length: 100 miles

<u>Segment 1-a</u>	- 15.1 miles	From the west boundary of the San Carlos Indian Reservation to the northeast boundary of the Salt River Canyon Wilderness.
<u>Segment 1-b</u>	- 9.2 miles	From the northeast boundary of the Salt River Canyon Wilderness to the west boundary of the Fort Apache Indian Reservation.
<u>Segment 2-a</u>	- 32.1 miles	From the west boundary of the Fort Apache Indian Reservation to the southwest boundary of the Salt River Canyon Wilderness.
<u>Segment 2-b</u>	- 0.1 miles	From the southwest boundary of the Salt River Canyon Wilderness to the State Highway 288 Bridge.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Upper Salt River Segment #1-b, Segment #2-a, and Segment #2-b, reference those reports.)

A. Segment Found Potentially Eligible for Designation:

Approximately 15.1 miles of stream are evaluated for this resource report.
Total acres in potential River Area of Segment 1-a: 2,300 acres
Percent administered by Forest Service: 100 %

Note: Only the area from the center of the river to the south is included as a part of this report. This report excludes the Fort Apache Indian Reservation since the Forest Service has no jurisdiction on Indian Reservations.

Township	4 1/2N	Range	16 E	Sections	16, 21
	5 N		16 E		12, 13, 14, 15, 20, 21, 22, 23, 24
	5 N		17 E		27, 28, 29, 31, 32
					7, 8, 9, 15, 16, 17, 18, 21, 22

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's)

Scenic Recreational
Geologic Ecological
Wildlife

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The Upper Salt River is located southwest of the Colorado Plateau Province, flowing through the Transition Zone, and Basin and Range Provinces of Arizona. The Upper Salt River has been identified as having outstandingly remarkable geologic values. The geology is complex and the Upper Salt River canyons offer excellent exposures which help define the geological evolution of southern Arizona. Geologic attractions within the canyon include a monocline with fully exposed structural features, salt-bank accumulations to which the Salt River owes its name, Proterozoic igneous, sedimentary, and metamorphic rock units, and Tertiary intrusives and sedimentary deposits. A clear view of the nature of the Precambrian basement is available. The Upper Salt River has been referred to as one of the most imposing scenic and geologic entities in all of Arizona, those qualities constituting outstandingly remarkable values.

B. Streamflow and Water Quality:

Streamflow is perennial. Median flow is 263 cfs in Segment Ia.

Water quality data from Arizona Department of Environmental Quality and U.S. Geologic Survey indicates that Arizona water quality standards are generally met. Occasional violations of turbidity, chloride, Total Dissolved Solids, Fecal Coli, and mercury standards have been recorded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that the segments within the potential River Area partially support the designated uses. Applicable water quality standards include: warmwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation:

The Upper Salt River has limited riparian vegetation or floodplain area due to confining canyon walls. In a few sites, where the river is not confined (such as Gleason Flat) some notable riparian communities occur. Most prevalent are the Mesquite Association, the Common Reed Association (Brown, 1982), and the Burrobrush Community.

The Mesquite Association, also known as mesquite bosque, is very limited in distribution along the Upper Salt River, but common on the Tonto National Forest. It occurs mainly where tributaries form a terrace near their confluence with the Salt River. The dominant tree or shrub is velvet mesquite.

Typically the dense overstory of mesquite has a canopy cover of 60 to 70%. Other tree and shrub species of minor significance, and include hackberry, catclaw, and graythorn. The herbaceous component is also low in diversity, consisting principally of the annual grass red brome.

The Common Reed Association (Brown, 1982) occurs as a dense, narrow band along the channel edge in portions of the river where scouring is not severe. It is dominated almost exclusively by common reed.

The Burrobrush Community Type is a shrub community which occupies frequently scoured point bars. Dominant species include burrobrush, seepwillow, and desert broom. Little herbaceous cover occurs.

D. Fish and Wildlife:

Fisheries: The Upper Salt River, one of the few, free-flowing "big" rivers in the state of Arizona, is truly crucial to the recovery of several Endangered, Threatened and Forest Service Sensitive fish. Historically, there were hundreds of miles of interconnected, free-flowing, large rivers in Arizona. These rivers supported large populations of native fish, including the razorback sucker, Colorado squawfish, roundtail chub, bonytail chub, loach minnow, spinedace, and woundfin. The majority of these fish are referred to as "big-river fish" because they were generally found in large rivers. It appears that they also used the lower sections of some tributaries to these large rivers. All of the above fish are on Endangered, Threatened, or Forest Service Sensitive. Water diversions, dams, and the lowering of water tables have resulted in the destruction or severe modification of the majority of their historic habitat. Approximately 40% of the Salt River has been modified or extirpated; portions of the remaining, unmodified 60% are within one of the segments of the potential River Area. The segments of the Upper Salt River are so important to the recovery of Arizona's native fish that the U.S. Fish and Wildlife Service has recently proposed that the Upper Salt River be designated as Critical Habitat for the Endangered razorback sucker.

Wildlife: Game species known to occur within this segment of the potential River Area include deer, bear, quail, wild turkey, and tree squirrels.

The Upper Salt River has been identified as having outstandingly remarkable wildlife value. This segment has two federal endangered species, two state endangered species, and one state threatened species. It provides vital nesting and foraging habitat for the bald eagle. Special wildlife species occurring along the Upper Salt River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Narrow-headed garter snake	- Candidate
Arizona southwestern toad	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate
Loggerhead shrike	- Candidate
Swainson hawk	- Candidate

Arizona State Threatened and Endangered species:

Mexican garter snake	- Endangered
Southwestern river otter	- Endangered
Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species: Harris' hawk, coati, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Retention
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive

The Salt River has been identified as having outstandingly remarkable scenic values. The river is characterized by mountains and mesas consisting of a fault block with varying degrees of lifting. The Salt River has cut a deep gorge with sheer walls through these blocks. Steep slopes, cliffs and many unique rock forms are common. Sandy beaches, desert pavement, and barren rock are common to the area. The Salt River itself provides a wide range of spectacular water scenery, from huge waves to quiet pools.

F. Cultural and Historical:

There are eight known sites within the potential River Area (none on the National Register). Available site data indicates a prehistoric utilization of the area by the Salado, during the period from AD 1150 - 1400. Types of sites range from small detached masonry rooms to continuous multistoried pueblos. Historic usage is primarily associated with ranching dating from the late 19th century to the present.

LAND USES AND DEVELOPMENTS

A. Land: Segment #1-a of the potential River Area is 13.1 miles in length and contains approximately 2,300 acres. There are no parcels of private land. It borders the Fort Apache Indian Reservation for its entire length.

Except for 240 acres, lands and waters within this Segment of the potential River Area are covered by withdrawals:

Arizona Water Power Designation #9

B. Water Rights and Water Resource Development: No diversions/dams exist on National Forest within this segment of the potential River Area. Diversions for irrigation of 3,100 acres occur some miles upstream on another stream. One major diversion averaging 11.5 cfs diverts water out of the Black River, some miles upstream of the potential River Area, for use in mining operations near Morenci. This diversion is partially offset by imports of water from the Little Colorado River Basin near Showlow. The net effect on water flow in the potential River Area is small. The San Carlos and Fort Apache Indian Reservations lie upstream of the potential River Area. Ultimate resolution of Indian water rights claims have an unknown effect on flow in the segment, but are very unlikely to affect the free-flowing character of this segment. The water resource developments that exist many miles upstream from this segment are not presently significantly affecting this segment's outstandingly remarkable values.

C. Transportation Facilities: Forest Road #473A comes to the bluffs above the river at one point, and Forest Road #303A comes to the river at the segment's lower end. All other access is via Reservation Road #1, on the Fort Apache Indian Reservation.

D. Recreation Activities and Facilities: There are no Forest Service developed recreation sites or facilities within this segment of the potential River Area. Dispersed recreation activities include cross-country hiking and backpacking, fishing, and white-water river-running (travel primarily by raft or kayak). This segment starts only a few miles downstream of State Highway 60, but direct access to Segment 1-a is limited to primitive dirt roads and river travel. An estimated 12,000 recreation visitor days (RVD's) occur within this segment.

Commercial activities include five permitted river-running outfitter/guide services.

E. Special Management Designations: None occur within this segment of the potential River Area.

F. Mining: There are no acres within Segment 1-a of the potential River Area withdrawn from mineral entry. All acreage remains open to mineral entry.

There are approximately 25 existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with Segment 1-a of the potential River Area. There are also several prospects within the general area.

There are no oil or gas leases within Segment 1-a, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the segment. The potential River Area crosses through the Salt River Mineral District with production records of 1,600 pounds of copper, 600 pounds of lead, and 300 ounces of silver during the period of 1916 to 1951, and 390 pounds of uranium in 1956. In addition, the segment is adjacent to known occurrences of asbestos and cobalt.

G. Special Uses:

Five Special Use Permits have been issued for outfitter/guide river-running services within the potential River Area, and there are also Forest-wide hiking and hunting guide services.

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment #1-a, but one grazing allotment has been established. The allotment has approximately 3.7 miles of fence, three corrals, and a livestock watering tank within Segment 1-a of the potential River Area.

Chrysotile Allotment has 8,680 authorized animal unit months (AUM's). Approximately 41 of the allotment is within this segment of the potential River Area, which would equate to 361 AUM's of grazing annually.

I. Timber: None of this segment is suitable for timber harvest. No sales have been transacted nor are there any future sales planned. The fuelwood use is extremely limited primarily due to lack of access, but this segment is open (under permit), to dead and down personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for adventure, challenge, solitude, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the livestock permittee derives social benefits from evolving a lifestyle that affords him the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$11.78 per recreation visitor day. An estimated visitation of 12,000 recreation visitor days occurred within Segment 1-a of the potential River Area, resulting in a total economic value of \$141,360.00 per annum.

Allotment fees for 1993 are \$1.86 per animal unit month for a total of 361 animal unit months occurring on the allotment within this segment, resulting in \$671.00 per annum in fees being collected by the government. There is no timber suitable for harvest within the potential River Area.

UPPER SALT RIVER
Segment 1-b

LOCATION

Located in Gila County (Congressional District 6), and partially within the Tonto National Forest. Upper Salt River begins at the confluence of the Black and White Rivers. It flows westerly into Roosevelt Reservoir. It is located east of State Highway 288 and north of the town of Globe, Arizona. Segments 2-a/2-b (32.2 miles) of the Upper Salt River is totally within the Tonto National Forest, while in Segment 1-a/1-b (24.3 miles) the middle of the river forms the boundary between the Fort Apache Indian Reservation and the Tonto National Forest (which is river-left). The Upper Salt River is a nationally-known white-water river, flowing through spectacular canyons.

Total River Length: 100 miles

Segment 1-a 15.1 miles From the west boundary of the San Carlos Indian Reservation
(South 1/2) to the northeast boundary of the Salt River Canyon Wilderness.

Segment 1-b 9.2 miles From the northeast boundary of the Salt River Canyon Wilderness to
(South 1/2) the west boundary of the Fort Apache Indian Reservation.

Segment 2-a 32.1 miles From the west boundary of the Fort Apache Indian Reservation to
the southwest boundary of the Salt River Canyon Wilderness.

Segment 2-b 0.1 miles From the southwest boundary of the Salt River Canyon Wilderness to
State Highway 288 Bridge.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Upper Salt River Segment #1-a, Segment #2-a, and Segment #2-b, reference those reports.)

A. Segment Found Potentially Eligible for Designation:

Approximately 9.2 miles of stream are evaluated for this resource report.

Total acres in potential River Area (Segment 1-b): 1,400 acres

Percent administered by Forest Service: 100 %

Note: Only the area from the center of the river (the same boundary that is used for the existing Salt River Canyon Wilderness) to the south is included in this report. This report excludes the Fort Apache Indian Reservation, since the Forest Service has no jurisdiction on Indian Reservations.

Township	4	N	Range	15 1/2 E	Sections	1, 2, 11, 12, 13, 14
	4	N		16 E		6, 7
	4 1/2 N			15 1/2 E		36
	4 1/2 N			16 E		16, 17, 20, 21, 28, 29, 30, 31, 32, 33

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic Recreational
Geologic Ecological
Wildlife

D. Classification - Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology - The Upper Salt River is located southwest of the Colorado Plateau Province, flowing through the Transition Zone and Basin and Range Provinces of Arizona. The Upper Salt River has been identified as having outstandingly remarkable geologic values. The geology is complex and the Upper Salt River canyons offer excellent exposures which help define the geological evolution of southern Arizona. Geologic attractions within the canyon include a monocline with fully exposed structural features, salt-bank accumulations to which the Salt River owes its name, Proterozoic igneous, sedimentary, and metamorphic rock units, and Tertiary intrusives and sedimentary deposits. A clear view of the nature of the Precambrian basement is available. The Upper Salt River has been referred to as one of the most imposing scenic and geologic entities in all of Arizona, these qualities constituting outstandingly remarkable values.

B. Streamflow and Water Quality - Streamflow is perennial. Median flow ranges from 265 cfs in Segment 1a, to 343 cfs in Segment 2b.

Water quality data from Arizona Department of Environmental Quality and U.S. Geologic Survey indicates that Arizona water quality standards are generally met. Occasional violations of turbidity, chloride, Total Dissolved Solids, Fecal Coll., and mercury standards have been recorded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that the segments within the potential River Area partially support the designated uses. Applicable water quality standards include: warm-water Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation - The Upper Salt River has limited riparian vegetation or floodplain area due to confining canyon walls. In a few sites, where the river is not confined, such as Gleason Flat, some notable riparian communities occur. Most prevalent are the Salt Cedar Association, the Mesquite Association, the Common Reed Association (Brown, 1982), and the Burrobrush Community.

The Salt Cedar Association occurs on very wet sites which are sheltered from extreme scouring action. Salt Cedar is an exotic species which aggressively invades lower-elevation riparian habitats. The community is characterized by a lack of other tree, shrub or herbaceous species. Stands have very high density and canopy cover. Low diversity reduces its value for wildlife habitat and recreational use.

The Mesquite Association, also known as mesquite bosque, is very limited in distribution along the Upper Salt River, but common on the Tonto National Forest. It occurs mainly where tributaries form a terrace near their confluence with the Salt River. The dominant tree or shrub is velvet mesquite. Typically the dense overstory of mesquite has a canopy cover of 60 to 70%. Other tree and shrub species of minor significance, and include hackberry, catclaw, and graythorn. The herbaceous component is also low in diversity, consisting principally of the annual grass red brome.

The Common Reed Association (Brown, 1982) occurs as a dense, narrow band along the channel edge in portions of the river where scouring is not severe. It is dominated almost exclusively by common reed.

The Burrobrush Community Type is a shrub community which occupies frequently scoured point bars. Dominant species include burrobrush, weepwillow, and desert broom. Little herbaceous cover occurs.

D. Fish and Wildlife:

Fisheries

The Upper Salt River, one of the few, free-flowing "big" rivers in the state of Arizona, is truly crucial to the recovery of several Endangered, Threatened and Forest Service Sensitive fish. Historically, there were hundreds of miles of interconnected, free-flowing, large rivers in Arizona. These rivers supported large populations of native fish, including the razorback sucker, Colorado squawfish, roundtail chub, bonytail chub, loach minnow, spinedace, and woundfin. The majority of these fish are referred to as "big river fish" because they were generally found in large rivers. It appears that they also used the lower sections of some tributaries to these large rivers. All of the above fish are on Endangered, Threatened, or Forest Service Sensitive. Water diversions, dams, and the lowering of water tables have resulted in the destruction or severe modification of the majority of their historic habitat.

Approximately 40% of the Salt River has been modified or extirpated; the remaining, unmodified 60% is partially within this segment of the potential River Area. The segments of the Upper Salt River are so important to the recovery of Arizona's native fish that the U.S. Fish and Wildlife Service has recently proposed that the Upper Salt River be designated as Critical Habitat for the Endangered razorback sucker.

Wildlife

Game species known to occur within Segment 1-b of the potential River Area include deer, bear, quail, wild turkey, and tree squirrels.

The Upper Salt River has been identified as having outstandingly remarkable wildlife value. This segment has two Federal Endangered species and, two State Endangered species. It provides vital nesting and foraging habitat for the bald eagle. Special wildlife species occurring along the Upper Salt River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Loggerhead shrike	- Candidate
Southwestern cave myotis	- Candidate
Narrow-headed garter snake	- Candidate
Arizona southwestern toad	- Candidate
Occult little brown bat	- Candidate

Arizona State Threatened and Endangered species:

Mexican garter snake	- Endangered
Southwestern river otter	- Endangered
Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species: Coati, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Preservation
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive

The Salt River has been identified as having outstandingly remarkable scenic value. The river is characterized by mountains and mesas consisting of a fault block with varying degrees of tilting. The Salt River has cut a deep gorge with sheer walls through these blocks. Steep slopes, cliffs and many unique rock forms are common. Sandy beaches, desert pavement, and barren rock are common to the area. The Salt River provides a wide range of spectacular water scenery, from huge waves to deep quiet ponds.

F. Cultural and Historical - There are eight known sites within the potential River Area (none on the National Register). Available site data indicates a prehistoric utilization of the area by the Salado, during the period from AD 1150 - 1400. Types of sites range from small detached masonry rooms to continuous multiroom pueblos. Historic usage is primarily associated with ranching dating from the late 19th century to the present.

LAND USES AND DEVELOPMENTS

A. Land - Upper Salt River Segment #1-b of the potential River Area is 9.2 miles in length, and contains approximately 1,400 acres. There are no parcels of private land within it. It borders the Fort Apache Indian Reservation for its entire length.

All lands and waters within this segment are covered by withdrawals:

Arizona Water Power Designation #8
Power Project Designation (AR 627)
Salt River Canyon Wilderness

B. Water Rights and Water Resource Developments - No diversions/dams exist on National Forest within Segment 1-b of the potential River Area. Diversions for irrigation of 3,100 acres occur upstream. One major diversion averaging 11.5 cfs diverts water out of the Black River, some miles upstream of the potential River Area, for use in mining operations near Morenci. This diversion is partially offset by imports of water from the Little Colorado River Basin near Showlow. The net effect on water flow in the potential River Area is small. The San Carlos and White Mountain Indian Reservations lie upstream of the potential River Area. Ultimate resolution of Indian water rights claims have an unknown effect on flow, but are very unlikely to affect the free-flowing character of this segment. The referenced water resource developments that exist many miles upstream from this segment are not significantly affecting this segment's outstandingly remarkable values.

C. Transportation Facilities - The only Forest road system access to this segment is Road #303A which comes to the river just upstream of the segment at Gleason Flat.

D. Recreation Activities and Facilities - There are no Forest Service developed recreation sites or facilities within Segment 1-b. Dispersed recreation activities include cross-country hiking and backpacking, fishing, and white-water river-running (travel primarily by raft or kayak). This segment is entirely within the Salt River Canyon Wilderness. Access is limited to foot, horseback, and river travel. An estimated 2,000 recreation visitor days (RVD's) occur within this segment.

Commercial activities include five permitted river-running outfitter/guide services:

E. Special Management Designations - This segment is entirely within the Salt River Canyon Wilderness which contains a total of 32,100 acres. The Salt River Canyon Wilderness was established in 1984, and its spectacular canyon bisects the Wilderness for its entire length. Elevations range from 2,200 feet at the canyon's lower end to 4,200 feet on White Ledge Mountain. There are no maintained trails within the entire wilderness. Travel is basically done by raft or kayak during the short and dangerous river-running season.

The boundary of this Wilderness at this location is the center of the Salt River, corresponding to the boundary of the potential River Area. To date this Wilderness boundary has proven satisfactory to the White Mountain Indian Tribe.

F. Mining - All of Segment 1-b of the potential River Area are withdrawn from mineral entry.

There are no existing mining claims within this segment, nor are there any oil or gas leases. Segment 1-b is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the segment. Three potential River Area crosses through the Ramsdell Mineral District with recorded production of 1,982,000 pounds of manganese, the period of production is unknown. This segment has few or no known copper deposits, but geologic terrane is favorable for its occurrence.

G. Special Uses - None, other than hunting, fishing, and river-running outfitter/guide services.

H. Livestock Grazing and Agriculture:

No agriculture occurs within Segment #1-b, but three grazing allotments have been established.

Chrysotile Allotment has 8,680 authorized animal unit months (AUM's). Approximately 0.4% of the allotment is within this segment of the potential River Area, which would equate to 36 AUM's of grazing annually. The allotment has one-half mile of fence improvement within this segment.

Haystack Butte Allotment has 2,520 authorized animal unit months (AUM's). Approximately 5.5% of the allotment is within this segment of the potential River Area, which would equate to 138 AUM's of grazing annually. The allotment has one mile of fence and a holding corral within this segment.

Sedow Allotment has 7,803 authorized animal unit months (AUM's). Approximately 1.2% of the allotment is within this segment of the potential River Area, which would equate to 93 AUM's of grazing annually. The allotment has one mile of fence, one holding corral, and a water trough improvement within this segment.

I. Timber - No sales have been transacted nor are there any future sales planned. This segment is located within the Salt River Canyon Wilderness, and there is no timber here suitable for harvest.

SOCIAL AND ECONOMIC VALUES

Social

There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for adventure, challenge, solitude, and viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the three livestock permittees derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest lands.

Economic

Economic values of recreational use were calculated by using a dollar value of \$18.89 per recreation visitor day. An estimated visitation of 2,000 recreation visitor days occurred within this segment, resulting in a total economic value of \$37,780.00 per annum.

Allotment fees are \$1.86 per animal unit month for a total of 592 animal unit months occurring on the allotments within this segment, resulting in \$500.00 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been, mined and marketed from the potential River Area.

UPPER SALT RIVER
Segments 2-a/2-b

LOCATION

Located in Gila County (Congressional District 6), and partially within the Tonto National Forest, Upper Salt River begins at the confluence of the Black and White Rivers. It flows westerly in Roosevelt Reservoir. It is located east of State Highway 288 and north of the town of Globe, Arizona. Segments 2-a/2-b (32.2 miles) of the Upper Salt River is totally within the Tonto National Forest while in Segment 1-a/1-b (24.3 miles) the middle of the river forms the boundary between the Fort Apache Indian Reservation and the Tonto National Forest (which is river-left). The Upper Salt River is a nationally-known white-water river, flowing through spectacular canyons.

Total River Length: 100 miles

<u>Segment 1-a</u>	15.1 miles (south 1/2)	From the west boundary of the San Carlos Indian Reservation to the northeast boundary of the Salt River Canyon Wilderness.
<u>Segment 1-b</u>	9.2 miles (south 1/2)	From the northeast boundary of the Salt River Canyon Wilderness to the west boundary of the Fort Apache Indian Reservation.
<u>Segment 2-a</u>	32.1 miles	From the west boundary of the Fort Apache Indian Reservation to the southwest boundary of the Salt River Canyon Wilderness.
<u>Segment 2-b</u>	0.1 miles	From the southwest boundary of the Salt River Canyon Wilderness to State Highway 288 Bridge.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Upper Salt River Segment #1-a and Segment #1-b, reference those resource reports.)

A. Segment Found Potentially Eligible for Designation:

Approximately 32.2 miles of stream are evaluated for this resource report.
Total acres in potential River Area (Segments 2a/2b): 6,780 acres
Percent administered by Forest Service: 99 %

Segment 2-a

Township	3 N	Range	14 E	Sections	1, 2, 3, 10, 11, 12
	3 N		15 E		1, 2, 5, 6
	4 N		14 E		6
	4 N		15 E		21, 22, 23, 24, 25, 26, 27, 28, 29
					31, 32, 33, 34, 35, 36
	4 N		15 1/2 E		11, 13, 14, 15, 22, 23, 24

Segment 2-b

Township	3 N	Range	14 E	Sections	9, 10
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B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic	Recreational
Geologic	Ecological
Wildlife	

D. Classification:

Segment 2-a - Wild
Segment 2-b - Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology - The Upper Salt River is located southwest of the Colorado Plateau Province, flowing through the Transition Zone and Basin and Range Provinces of Arizona. The Upper Salt River has been identified as having outstandingly remarkable geologic values. The geology is complex and the Upper Salt River canyons offer excellent exposures which help define the geological evolution of southern Arizona. Geologic attractions within the canyon include a monocline with fully exposed structural features, salt-bank accumulations to which the Salt River owes its name, Proterozoic igneous, sedimentary, and metamorphic rock units, and Tertiary intrusives and sedimentary deposits. A clear view of the nature of the Precambrian basement is available. The Upper Salt River has been referred to as one of the most imposing scenic and geologic entities in all of Arizona; these qualities constitute outstandingly remarkable values.

B. Streamflow and Water Quality - Streamflow is perennial. Median flow is 343 cfs in Segment 2b.

Water quality data from Arizona Department of Environmental Quality and U.S. Geologic Survey indicates that Arizona water quality standards are generally met. Occasional violations of turbidity, chloride, Total Dissolved Solids, Fecal Coli, and mercury standards have been recorded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that the segments within the potential River Area partially support the designated uses. Applicable water quality standards include: warm-water Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation - The Upper Salt River has limited riparian vegetation or floodplain area due to confining canyon walls. In a few sites, where the river is not confined (such as Horseshoe Bend) some notable riparian communities occur. Most prevalent are the Salt Cedar Association, the Mesquite Association, the Common Reed Association (Brown, 1982), and the Burrobrush Community.

The Salt Cedar Association occurs on very wet sites which are sheltered from extreme scouring action. Salt Cedar is an exotic species which aggressively invades lower-elevation riparian habitats. The community is characterized by a lack of other tree, shrub or herbaceous species. Stands have very high density and canopy cover. Low diversity reduces its value for wildlife habitat and recreational use.

The Mesquite Association, also known as mesquite bosque, is very limited in distribution along the Upper Salt River, but common on the Tonto National Forest. It occurs mainly where tributaries form a terrace near their confluence with the Salt River. The dominant tree or shrub is velvet mesquite. Typically the dense overstory of mesquite has a canopy cover of 60 to 70%. Other tree and shrub species of minor significance, and include hackberry, catclaw, and graythorn. The herbaceous component is also low in diversity, consisting principally of the annual grass red brome.

The Common Reed Association (Brown, 1982) occurs as a dense, narrow band along the channel edge in portions of the river where scouring is not severe. It is dominated almost exclusively by common reed.

The Burrobrush Community Type is a shrub community which occupies frequently scoured point bars. Dominant species include burrobrush, seepwillow, and desert broom. Little herbaceous cover occurs.

The Upper Salt River supports a few minor pockets of Fremont Cottonwood-Goodding Willow Association (Brown, 1982), at the Salt River's confluences with Coon Creek and Cherry Creek. Dominant trees are Fremont cottonwood and Goodding Willow. This is the rarest riparian community on the Tonto National Forest, but these small stands have little potential for expansion due to scouring effects from the Salt River.

D. Fish and Wildlife:

Fisheries

The Upper Salt River, one of the few, free-flowing "big" rivers in the state of Arizona, is truly crucial to the recovery of several Endangered, Threatened and Forest Service Sensitive fish. Historically, there were hundreds of miles of interconnected, free-flowing, large rivers in Arizona. These rivers supported large populations of native fish, including the razorback sucker, Colorado squawfish, roundtail chub, bonytail chub, loach minnow, spinedace, and woundfin. The majority of these fish are referred to as "big river fish" because they were generally found in large rivers.

It appears that they also used the lower sections of some tributaries to these large rivers. All of the above fish are on Endangered, Threatened, or Forest Service Sensitive. Water diversions, dams, and the lowering of water tables have resulted in the destruction or severe modification of the majority of their historic habitat.

Approximately 40% of the Salt River has been modified; portions of the remaining, unmodified 60% are within this potential River Area. These segments of the Upper Salt River are so important to the recovery of Arizona's native fish, that the U.S. Fish and Wildlife Service has recently proposed that the Upper Salt River be designated as Critical Habitat for the Endangered razorback sucker.

Wildlife

Game species known to occur within these segments of the potential River Area include deer, bear, quail, wild turkey, and tree squirrels.

The Upper Salt River has been identified as having outstandingly remarkable wildlife value. Riparian habitat ranges from good to moderate and provides vital nesting and foraging habitat for the bald eagle. Special wildlife species occurring along the Upper Salt River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Perigrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered

Arizona State Threatened and Endangered species:

Mexican garter snake	- Endangered
Southwestern river otter	- Endangered
Western yellow-billed cuckoo	- Threatened
Narrow-headed garter snake	- Candidate
Lowland leopard frog	- Candidate
Arizona southwestern toad	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species:

Occult little brown bat, Harris' hawk, Swainson hawk, loggerhead shrike, coatí, southwestern cave myotis, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	<u>Segment 2-a</u> - Preservation
	<u>Segment 2-b</u> - Retention
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive

The Salt River has been identified as having outstandingly remarkable scenic values. The river is characterized by mountains and mesas consisting of a fault block with varying degrees of tilting. The Salt River has cut a deep gorge with sheer walls through these blocks. Steep slopes, cliffs and many unique rock forms are common. Sandy beaches, desert pavement, and barren rock are common to the area. The predominate vegetation in the lower elevations is sonoran desert scrub, while interior chaparral dominates the higher elevations. Dense stands of giant saguaro and palo verde are found, with stringers of riparian deciduous forest and woodland, common along the waterway. The river itself provides a wide variety of spectacular water scenery, from high waves to deep quiet pools. Pinal Creek marks the boundary between Segment 2-a and 2-b. There have been spills into this creek from upstream mining operations which have permanently stained and discolored the rocks in Segment 2-b.

The views from Segment 2-a are excellent; there are no significant man-made structures or mining operations of any type visible. Except for jet aircraft, external noise also presents no problem. The views and noise from Segment 2-b have a significant negative impact on the visitor's experience.

F. Cultural and Historical - There are eight known sites within the potential River Area (none on the National Register). Available site data indicates a prehistoric utilization of the area by the Salado, during the period from AD 1150 - 1400. Types of sites range from small detached masonry rooms to continuous multi-room pueblos. Historic usage is primarily associated with ranching dating from the late 19th century to the present.

LAND USES and DEVELOPMENTS

A. Land - Upper Salt River Segment #2-a potential River Area is 32.1 miles in length, and contains approximately 6,750 acres. There is one parcel (43 acres) of private land within it.

Upper Salt River Segment #2-b potential River Area is 0.1 miles in length, and contains approximately 31 acres. There are no parcels of private land within it.

Land withdrawals (includes entire segment) within the potential River Area are:

Segment 2-a

Power Project Designation (AR 627)
Power Project Designation (AR 953)
Arizona Water Power Designation #8
Salt River Canyon Wilderness

Segment 2-b

Power Project Designation (AR 953)
Arizona Water Power Designation #8

B. Water Rights and Water Resource Developments - No diversions/dams exist on National Forest within these segments of the potential River Area. Diversions for irrigation of 3,100 acres occur some miles upstream on another stream. One major diversion averaging 11.5 cfs diverts water out of the Black River, many miles upstream of Segments 2-a/2-b, for use in mining operations near Morenci. This diversion is partially offset by imports of water from the Little Colorado River Basin near Showlow. The net effect on water flow in the potential River Area is small. The San Carlos and Fort Apache Indian Reservations lie upstream of the potential River Area. Ultimate resolution of Indian water rights claims have an unknown effect on flow in the segment, but are very unlikely to affect the free-flowing character of these reaches. The water resource developments that exist many miles from this segment are not presently significantly affecting this segment's outstandingly remarkable values.

C. Transportation Facilities - The only Forest access to these segments of the potential River Area is by State Highway 288 and Forest Development Road #219 (which provides access to private land at Horseshoe Bend). There is one system trail within Segment 2-a that provides access to the river.

D. Recreation Activities and Facilities:

Segment 2-a

There are no developed recreation sites or facilities within these segments of the potential River Area. Dispersed recreation activities include hiking and backpacking, fishing, and white-water river-running (travel primarily by raft or kayak). Segment 2-a is entirely within the Salt River Canyon Wilderness. Access is gained from State Highway 288, and Forest Development Road #219. Otherwise travel is limited to cross-country, horseback, and river-running. One short Forest system trail, Hicks Trail 300, accesses the area near Horseshoe Bend. An estimated 2,000 recreation visitor days (RVD's) occur within Segment 2-a of the potential River Area. Commercial activities include three permitted river-running outfitter/guide services.

Segment 2-b

There are no developed recreation sites within the potential River Area, although the Upper Salt River - River Access Point is located downstream from State Highway 288 Bridge. This access point primarily serves as a take-out point for river-runners, but also provides access for fishing and other activities. Dispersed recreation activities include water play, fishing, and white-water river running with water play and river-running being the most popular activities. Primary access to the potential River Area is gained from State Highway 288. The entire atmosphere of the river experience suddenly changes upon leaving Segment 2-a, with heavy highway traffic, many man-made structures, and high noise levels. An estimated 4,250 recreation visitor days (RVD's) occur within Segment 2-b of the potential River Area. Commercial activity consists of the same three permitted river-running outfitter/guide services.

E. Special Management Designations - All of Segment 2-a is located within the Salt River Canyon Wilderness boundary, while Segment 2-b is located outside of the Wilderness boundary.

Salt River Canyon Wilderness - 32,100 acres

The Salt River Canyon Wilderness was established in 1964, and its spectacular canyon bisect the wilderness for its entire length. Elevations range from 2,200 feet at the canyon's lower end to 4,200 feet on White Ledge Mountain. There are no maintained trails within the entire wilderness. Travel is basically done by raft or kayak during the short and dangerous river-running season.

F. Mining - All of Segments 2-a and 2-b are withdrawn from mineral entry. There are no existing mining claims which have been identified (Bureau of Land Management, May 10, 1993) as contained within the sections associated in the potential River Area. Occurrences of asbestos and uranium are reported in both Segments 2-a/2-b, although the areas exhibit unfavorable geological environments for resource accumulations. Both segments lie within an area of few or no known copper deposits, however geologic terrane indicates conditions favorable for its occurrence.

There are no oil or gas leases within the potential River Area. Both segments are located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries within the segments.

G. Special Uses - A Special Use Permit has been issued within the potential River Area of Segment 2-b to: U.S. Department of Interior - gaging station (MOU).

Special Use Permits have also been issued for outfitting/guiding activities as indicated above.

H. Livestock Grazing and Agriculture - No agriculture occurs within Segments #2-a/2-b, which have four grazing allotments established within them.

Dagger Allotment has 4,400 authorized animal unit months (AUM's). Approximately 8% of the allotment is within these segments. The north side of the Salt River is generally inaccessible to livestock; estimated use is 30 AUM's.

Hicks-Pikes Peak Allotment has 13,960 authorized animal unit months (AUM's). Approximately 7% of the allotment is within the potential River Area, which would equate to 1,090 AUM's of grazing annually. The allotment has 1.4 miles of fence, a shipping corral, and one water trough located within Segment 2-a.

Sedow Allotment has 7,803 authorized animal unit months (AUM's). Approximately 2% of the allotment is within Segment 2-a, but the country is so rough that there is minimal grazing; approximately 40 AUM's. The allotment has one mile of fence and one holding corral within the segment.

Poison Springs Allotment has 4,740 authorized animal unit months (AUM's). Only a few acres are within the potential River Area, which would equate to 10 AUM's of grazing annually in Segment 2-a. Under the new Allotment Management Plan, there will be even less use within the potential River Area.

I. Timber - No sales have been transacted nor are there any future sales planned. Segment 2-a potential River Area is located within the Salt River Canyon Wilderness boundary where timber harvesting is restricted, and as such, all 6,750 acres are not suitable for timber harvest. Segment 2-b fuelwood use is extremely limited to none, primarily due to access. The segment is open, under permit, for dead and down personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social

There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for adventure, challenge, solitude, and viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the four livestock permittees derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest System lands.

Economic

Economic values of recreational use were calculated by using a dollar value of \$18.89 per recreation visitor day. An estimated visitation of 4,250 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$80,282.00 per annum.

Allotment fees are \$1.86 per animal unit month for a total of 1,170 animal unit months, occurring on the allotments within the potential River Area, resulting in \$2,176.00 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been, mined and marketed from the Segments 2-a or 2-b (which have been closed to mineral entry for over half a century), and there is no timber suitable to harvest.

WORKMAN CREEK

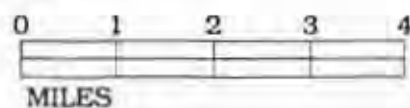
WORKMAN CREEK



R.12E

R.13E

R.14E



180

WORKMAN CREEK
Segment #1

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, Workman Creek is located west of State Highway 288 and approximately 20 south of Young, Arizona. Workman Creek Falls is a central feature on the eastern end. As it enters the Salome Wilderness, the creek flows through the deep canyon of "Hell's Hole" as it descends from a pine/fir environment into the lower chaparral country.

Total Stream Length: 9.7 miles

Segment 1 - 6.0 miles From Workman Falls to the Salome Wilderness boundary.

Segment 2 - 2.7 miles From the boundary of Salome Wilderness to its confluence with Salome Creek.

Note: The entire stream length was evaluated, and only the above two segments were found to be eligible.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Workman Creek Segment #2, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 6.0 miles of stream are evaluated for this resource report.

Total acres in potential River Area, Segment #1: 1,850 acres

Percent administered by Forest Service: 93 %

Township	6 N Range	13 E Sections	10, 14, 15, 23, 24, 25
	6 N	14 E	19, 29, 30, 31, 32, 33

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Wildlife
Ecological
Riparian

D. Classification:

Recreational

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Workman Creek is located south of the Mogollon Rim in the Transition Zone between the Colorado Plateau and the Basin and Range Provinces of Arizona. The area is underlain by igneous and sedimentary rocks of Proterozoic age, gravel, and tuff of Tertiary age and Quaternary talus and alluvium. The Sierra Ancha Monocline crosses perpendicular to the Creek within the potential River Area, offering excellent exposures to structural features and rock unit contacts.

B. Streamflow and Water Quality:

Streamflow is perennial. Median flow is estimated to be approximately 0.5 cfs.

Water quality data from Arizona Department of Environmental Quality indicates that Arizona water quality standards are generally met. Arizona Department of Health Services investigations found gross alpha radiation violations near an abandoned uranium mine in 1980-81.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report identifies the potential River Area as "threatened" in its support of designated uses which include: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation:

Segment #1 of the potential River Area is an alder riparian community. It is described by Brown (1992) as the Arizona alder Association. This densely forested community is relatively common on the Tonto National Forest at elevations above 4,500 feet.

Eleven tree species are present, with the most common including alder, sycamore, Gambel's oak, walnut, Douglas fir, and ponderosa pine.

Segment #1 has been identified as having outstandingly remarkable ecological and riparian values. Workman Creek riparian vegetation is in good condition, and is successional advanced. It has not been grazed by livestock in recent years, though it is within an area allotted to livestock grazing. This riparian community has two riparian-dependent Forest Service Sensitive plant species. Each species is also a federal candidate for listing as "threatened or endangered." Chiricahua dock occurs naturally in Workman Creek, and Arizona bugbane occurs only on Workman Creek (in the Tonto Forest), and is limited to sites on the Kaibab and Coconino Forests in central Arizona for its entire distribution.

D. Fish and Wildlife:

Fisheries: Workman Creek supports a put-and-take rainbow trout fishery. The fishing pressure is moderate to heavy during the summer months. There are no known records for threatened or endangered fish, and the creek may not be appropriate as a reintroduction site for native fish because it has been known to dry up during drought years.

Wildlife: Game species known to occur within the potential River Area include deer, elk, bear, band-tailed pigeon, quail, and tree squirrels.

Segment #1 has been identified as having outstandingly remarkable wildlife value. The narrow floodplain supports a variety of threatened and endangered species. Special species known to occur along Workman Creek Segment #1 may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Mexican spotted owl	- Threatened
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate

Arizona State Threatened and Endangered species:

Mexican garter snake	- Endangered
Northern goshawk	- Candidate

Forest Service sensitive species: Flammulated owl.

E. Visual Resources:

Visual Quality Objective:	Retention
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	A-Distinctive

This stream has been identified as having outstandingly remarkable scenic values. Workman Creek Falls is a central feature on the eastern end of the canyon, (the tallest known falls on the Tonto National Forest). This babbling stream, on its way to the Salome Wilderness, drops into solid rock pools. Vegetation is diverse with a mixture of pine and fir created by the microclimate of the narrow canyon. The combination of special plant and animal species, in conjunction with its high scenic quality, create a unique stream environment.

F. Cultural and Historical:

There are four (AR-03-12-05-625,-626,-05,-218) known sites within Segment #1 of the potential River Area. The few sites recorded within the area are associated with the Ancha Mogolico cultural tradition with an occupation between AD 1150 - 1350. Sites range from sherd and lithic scatters to a cliff dwelling. Historic use of the area includes structural remains of the Aster Lodge Resort and a Works Project Administration (WPA)/Civilian Conservation Corps (CCC) work camp, dating from the 1920's to the 1940's.

LAND USES AND DEVELOPMENTS

A. Land: Segment #1 is 6.0 miles in length, and contains approximately 1,850 acres. There are two parcels of private land within it.

1,727 acres (93%) National Forest

123 acres (7%) private land:

61 acres in sec. 14 & 15 T. 6 N., R. 13 E., G&SRM

62 acres in sec. 23 & 24 T. 6 N., R. 13 E.

Land allocations within the potential River Area are:
Sierra Ancha Experimental Forest (see item E. below).

B. Water Rights and Water Resource Developments: Two small diversions exist on the National Forest within Segment #1 of the potential River Area for irrigation of less than one acre of private land. Two instream pumps, and a stream diversion are located on private lands within this segment for irrigation of 7.5 acres of private land. The effect of these diversions on the free-flowing character of the segment is small negligible.

C. Transportation Facilities: State Highway 288 (the Young Highway) crosses Segment #1. This segment can be accessed by Forest Development Road #487 along its length from State Highway 288 to the segment's eastern boundary. From State Highway 288 to the wilderness boundary, there is a special use permit road to provide access to private land that lies along the creek.

D. Recreation Activities and Facilities: No developed recreation sites are located within the potential River Area, but some facilities (including vault toilets) are provided to accommodate the heavy use by recreationists. Dispersed recreation activities include car camping, picnicking, driving for pleasure, and fishing. Easy access is provided by State Highway 288 and other roads. An estimated 2,000 recreation visitor days (RVD's) occur within this segment of the potential River Area. Commercial activity consists of outfitter/guide hunting and fishing-related services.

E. Special Management Designations: Sierra Ancha Experimental Forest (contains a total of 13,371 acres) was established and managed for purposes of research on vegetative treatments for increasing water yield. The Experimental Forest is operated by the Rocky Mountain Forest and Range Experiment Station, Fort Collins, Colorado, often cooperatively with Arizona State University and the University of Arizona. Approximately 3% of the Experimental Forest is contained within this segment (approximately 1.3 miles).

F. Mining: There are no acres within the potential River Area withdrawn from mineral entry. All acreage remains open to mineral entry.

There are approximately 110 existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with Segment #1 of the potential River Area.

There are no oil or gas leases within this segment. It is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries in the potential River Area. Segment #1 extends through areas with numerous known mineral deposits and geologically favorable conditions for the occurrence of copper, uranium, and silver. The upper reach exhibits high potential for uranium.

G. Special Uses:

Special Use Permits issued within Segment #1 of the potential River Area are:

Arizona Department of Transportation	- Highway
Grantland YMCA	- Road access
	- Two diversion dams

H. Livestock Grazing and Agriculture: No agriculture occurs within Segment #1, which has two grazing allotments established within it. The allotments have minor fence and watergap improvements on them.

Armer Mountain Allotment has 2,509 authorized AUM's. Approximately 3% of the allotment is within the segment, which would equate to 70 AUM's annually.

The portion of the A Cross Allotment which covers this segment is not presently grazed.

1. Timber: There is approximately 1,280 acres suitable for timber harvest per Tonto National Forest Land and Resource Management Plan, with 570 acres being unsuitable for timber harvest. Presently there are no sales transacted, however, there could be timber sales within the next five year period. Approximate volume per acre, available for future harvest, would be 3,000 board feet (a total of 3,800,000 board feet within the segment per 20 year entry cycle).

There is limited fuelwood use, due to the restrictions around the Sierra Ancha Experimental Forest. Presently personal fuelwood gathering is allowed under permit within the area suitable for timber harvest, for dead and down and dead standing juniper.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the livestock permittee and the local land owner derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$10.49 per recreation visitor day. An estimated visitation of 2,000 recreation visitor days occurred within Segment #1 resulting in a total economic value of \$20,980.00 per annum.

Allotment fees for 1993 are \$1.86 per animal unit month for a total of 70 animal unit months, occurring on the allotments within this segment, resulting in \$130.00 per annum in fees being collected by the government. There are 3,800,000 board feet per 20 year entry cycle of harvestable timber within the potential River Area. The approximate economic value per annum would be \$1,280.00

WORKMAN CREEK
Segment #2

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest. Workman Creek is located approximately 20 miles south of Young and west of State Highway 288. The creek flows through the deep canyon of "Hell's Hole" as it descends from a pine/fir environment into the lower chaparral country.

Total Stream Length: 9.7 miles

Segment 1 - 8.0 miles From Workman Falls to the Salome Wilderness boundary.

Segment 2 - 2.7 miles From the boundary of Salome Wilderness to the confluence with Salome Creek.

Note: The entire stream length was evaluated, and only the above two segments were found to be potentially eligible.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on Workman Creek Segment #1, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 2.7 miles of stream are evaluated for this resource report.

Total acres in potential River Area, Segment #2: 830 acres

Percent administered by Forest Service: 100 %

Township 6 N Range 13 E Sections 8, 9, 10, 11, 14, 15

B. Eligibility:

Free-flowing - Yes

Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Wildlife
Ecological
Riparian

D. Classification:

Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Workman Creek is located south of the Mogollon Rim in the Transition Zone between the Colorado Plateau and the Basin and Range Provinces of Arizona. The area is underlain by igneous and sedimentary rocks of Proterozoic age, gravel, and tuff of Tertiary age and Quaternary talus and alluvium. The narrow gorge known as Hell's Hole is located within this segment and exhibits steep cliffs formed by ancient granites and volcanics.

B. Streamflow and Water Quality:

Streamflow is perennial. Median flow is estimated to be approximately 0.5 cfs.

Water quality data from Arizona Department of Environmental Quality indicates that Arizona water quality standards are generally met.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report identifies the potential River Area as "threatened" in its support of designated uses, identified as: coldwater Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation:

Segment #2 of the potential River Area is severely confined by steep canyon walls, and supports only sparse riparian vegetation due to scouring. No site specific riparian data are available.

Workman Creek riparian vegetation is in good condition, and is successional advanced. It has not been grazed by livestock in recent years, though it is within an area allotted to livestock grazing.

D. Fish and Wildlife:

Fisheries: Workman Creek supports a put-and-take rainbow trout fishery. The fishing pressure is slight during the summer months. There are no known records of threatened or endangered fish, and the creek may not be appropriate as a reintroduction site for native fish because it has been known to dry up during drought years.

Wildlife: Game species known to occur within Segment #2 include deer, bear, quail, and rabbits.

The narrow floodplain supports a variety of wildlife species. Special wildlife species within Segment #2 may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Greater western mastiff-bat	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate

Arizona State Threatened and Endangered species:

Mexican garter snake	- Endangered
Western red bat	- Candidate
Lowland leopard frog	- Candidate

Forest Service sensitive species: Coati, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Preservation
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	A-Distinctive

This stream has been identified as having outstandingly remarkable scenic values. This babbling stream drops into solid rock pools before descending into a big, deep canyon called "Hell's Hole." The vegetation changes rapidly to chaparral with the drop in terrain to the lower country. The combination of special plant and animal species in conjunction with its high scenic quality create a unique stream environment.

F. Cultural and Historical:

None occur within the potential River Area.

LAND USES AND DEVELOPMENTS

A. Land: Segment #2 of the potential River Area is 2.7 miles in length, and contains approximately 830 acres. There are no parcels of private land.

Land withdrawals within the potential River Area are:

Salome Wilderness - Withdrawn from all forms of Public Land Laws and Mineral.

B. Water Rights and Water Resource Developments: No water resource developments occur within Segment #2 of the potential River Area.

C. Transportation Facilities: Segment #2 of the potential River Area within Salome Wilderness can be accessed by Hell's Hole Trail #284 which drops down to the creek, but does not follow the river corridor.

D. Recreation Activities and Facilities: The potential River Area is almost entirely within Salome Wilderness. The only recreation development is a short segment of Hell's Hole Trail #284. Dispersed recreation activities include hiking, backpacking, hunting, and fishing. Primary access is limited to foot and horse travel. An estimated 100 recreation visitor days (RVD's) occur within the potential River Area. Commercial activity consists of outfitter/guide hunting and fishing related services.

E. Special Management Designations:

Salome Wilderness - 18,530 acres

All of the potential River Area is contained within Salome Wilderness. This Wilderness was established in 1984, and has a major canyon running practically its entire length. The upper reaches of Salome Creek and Workman Creek are small perennial streams snaking their way through the bottom of this scenic canyon. Inviting pools of water can be found nearly yearlong. Elevations range from 2,600 feet at the lower end of Salome Creek to 6,500 feet on Hopkins Mountain.

F. Mining: All acres within this segment are withdrawn from mineral entry.

No existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. Workman Creek Segment #2 is located within a zone identified as exhibiting low probability for economic petroleum reserves. There are no developed geothermal sites, active mining operations, or quarries in the potential River Area. Mineral occurrences within Segment #2 have been identified as exhibiting low mineral resource potential.

G. Special Uses:

None occur within the potential River Area.

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential River Area. Workman Creek Segment #2, has two allotments established within the potential River Area. The allotments have short stretches of fence and watergap improvements on them.

Buzzard Roost Allotment has 5,334 authorized animal unit months (AUM's). Approximately 0.5% of the allotment is within the potential River Area, which would equate to 27 AUM's of grazing annually.

Armer Mountain Allotment has 2,358 authorized AUM's. Approximately 1% of the allotment is within the potential River Area, which would equate to 24 AUM's of grazing annually.

I. Timber: No sales have been transacted, nor are there any future sales planned. The potential River Area is located entirely within the Salome Wilderness which restricts timber harvesting, and as such, all 830 acres of timber are not suitable for harvest.

SOCIAL AND ECONOMIC VALUES

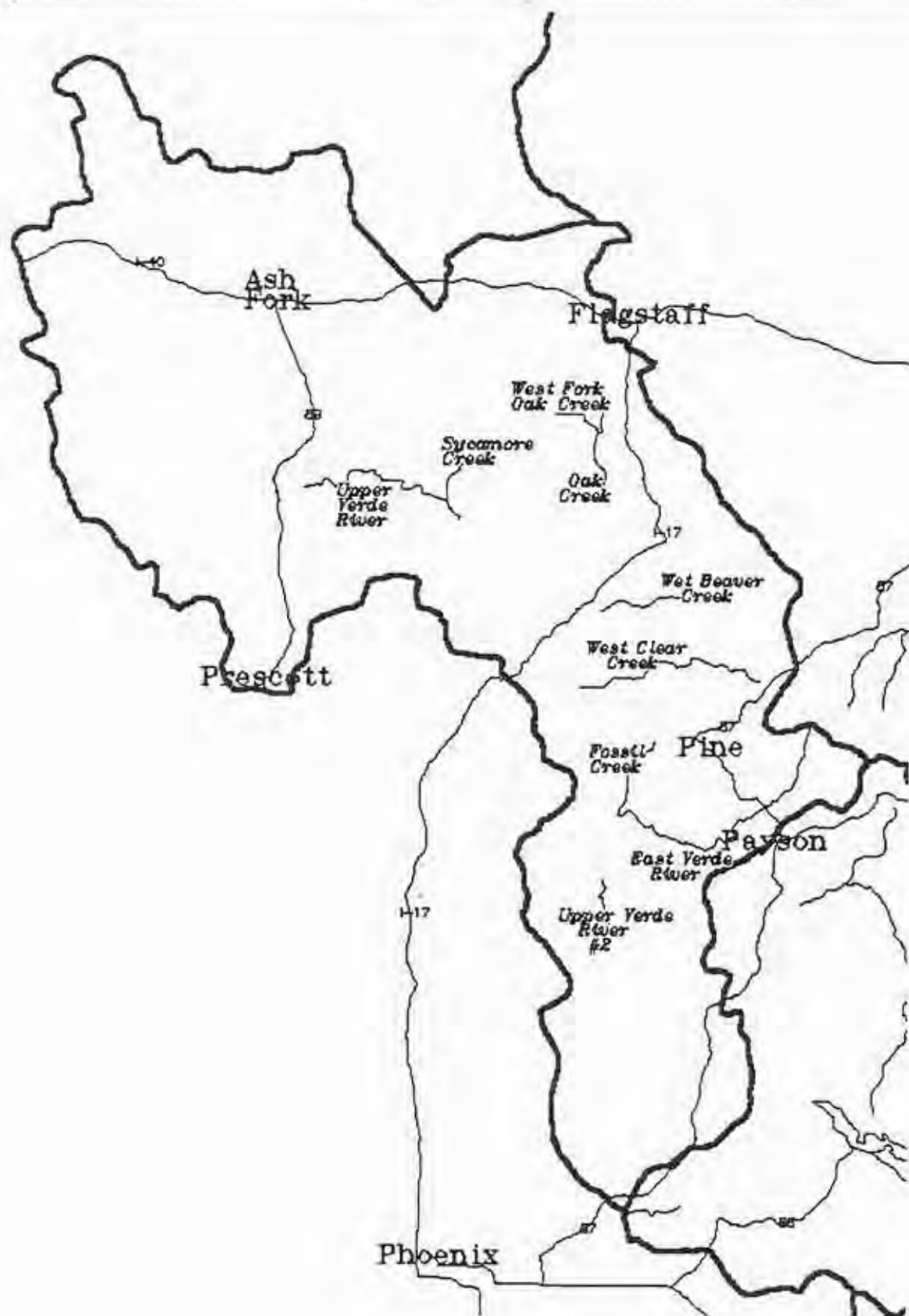
Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery and wildlife in an area with preserved unique, natural conditions, while the two livestock permittees derive social benefits from a way of life associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$18.89 per recreation visitor day. An estimated visitation of 100 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$1,889.00.

Allotment fees for 1993 are \$1.86 per animal unit month for a total of 51 animal unit months, occurring on the allotments within this segment of the potential River Area, resulting in \$95.00 per annum in fees being collected by the government. There is no timber suitable for harvest.

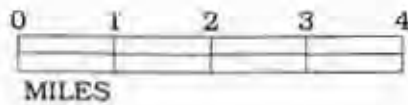
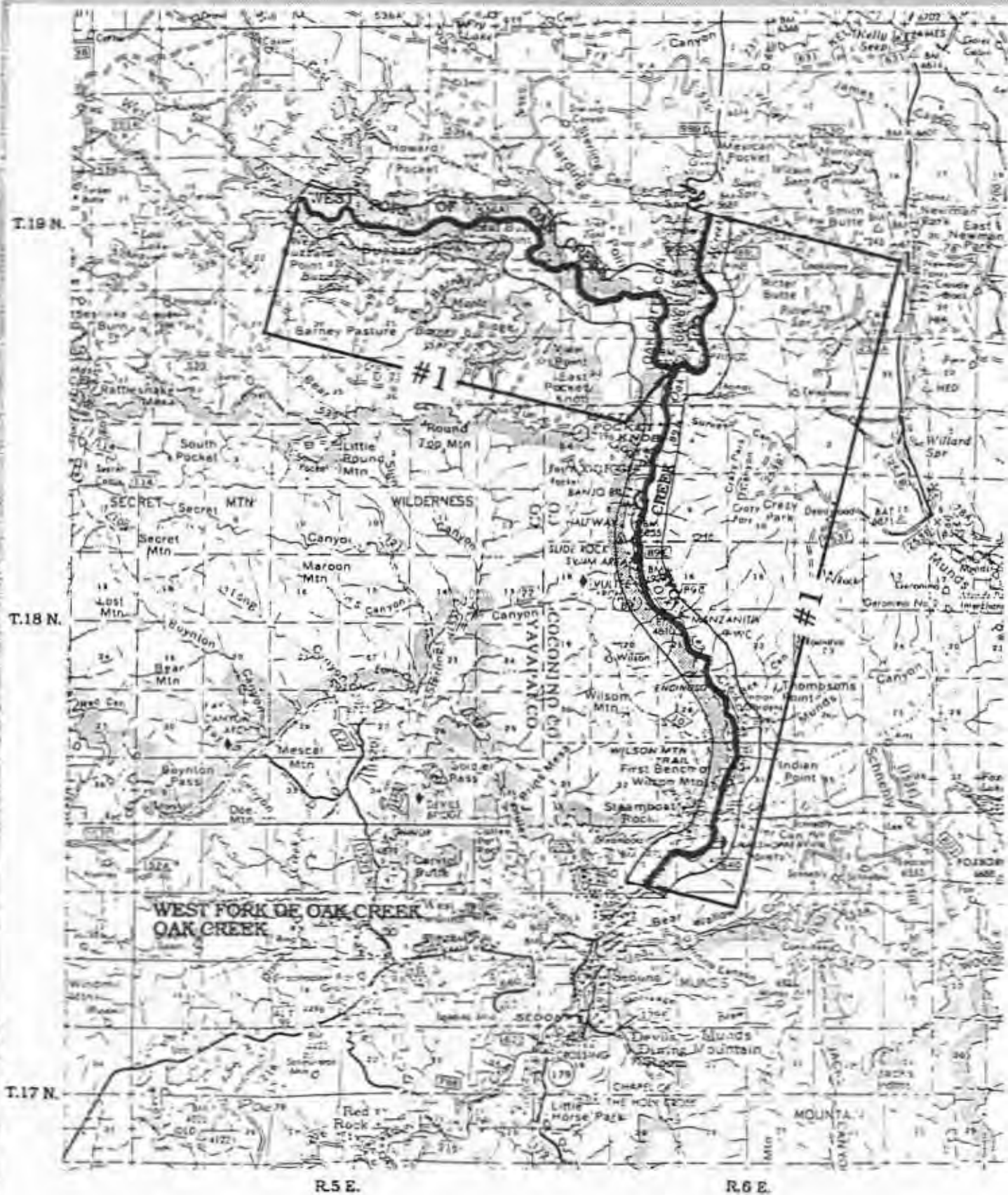
VERDE RIVER BASIN



NORTH

OAK CREEK

OAK CREEK



OAK CREEK

LOCATION

Oak Creek is located on the Coconino National Forest in Coconino and Yavapai Counties, Arizona. The origin is Sterling Springs along the Mogollon Rim from where the stream cuts the Rim and flows southward for a distance of approximately 50 miles to its confluence with the Verde River as a part of the Verde River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 20 miles of Oak Creek in two segments were evaluated for potential Wild and Scenic River designation. The first segment was from the Sterling Springs Fish Hatchery to private land in Section 5, Township 17 North, Range 6 East, within the city limits of Sedona. This segment is approximately 13 miles long. The second segment was from private land in Section 33, Township 17 North, Range 5 East to private land in Section 14, Township 16 North, Range 4 East, for a total of 7 miles. This segment is farther downstream than the first, south of Sedona and Red Rock State Park. Oak Creek is free flowing for its full length, but there are some diversions from the creek for agricultural purposes. Segment #1 was found to possess outstandingly remarkable resource values and was therefore considered potentially eligible with a recreation classification. Outstandingly remarkable values were not identified for Segment #2 and therefore it is not considered potentially eligible. The stream corridor in Segment #1 contains 3,870 acres. Of this acreage 450 acres are on private land and 3,420 are National Forest land. The following values were identified in Segment #1 as outstandingly remarkable:

1. **Scenic Values** - Oak Creek Canyon is known both nationally and world-wide for its scenic beauty. The striking geologic features and the lush diverse stream-side and canyon vegetation creates a scenic environment that draws visitors from around the world.
2. **Recreational Values** - The opportunity for fishing, camping, hiking, swimming, and sightseeing make this an outstandingly remarkable value.
3. **Geological Values** - The creek has incised the Mogollon Rim and exposed a great deal of the geologic history of Arizona. The geologic features created by the process of erosion are spectacular and varied. The Rim itself marks the division between the Colorado Plateau and the Transition Zone, two of the three major geologic provinces of the State.
4. **Fisheries Habitat Values** - Oak Creek is an extremely valuable cold water fishery. It is one of the few perennial stream on the Coconino National Forest capable of providing year-round fisheries habitat. The fish species in the stream are not native, however, but are stocked on a continuing basis by the Arizona Game and Fish Department.
5. **Riparian Values** - The riparian habitat in Oak Creek is diverse, healthy and well developed. The diversity alone would make it outstandingly remarkable.
6. **Ecological Values** - The canyon environment and the presence of a good size perennial stream in the arid environment of the Colorado Plateau creates ecological values which are outstanding.

DESCRIPTION OF RESOURCES AND VALUES

Geology: The geologic processes of faulting and erosion have been the primary means for formation of the Canyon of Oak Creek. The creek itself is the geologic agent which has cut the Rim and revealed a past landscape much different than the present. The Cenozoic basalt which caps the Rim represents the recent geologic past and a period of active volcanism. The sedimentary layers beneath this cap show conditions as diverse as the presence of a warm shallow water sea, the Kaibab Limestone, 250 million years ago, to what may have been an extensive desert area represented by the cross bedded Coconino sandstone deposited some 260 million years ago.

Ten formations going back a total of 330 million years to the Mississippian Period of the Paleozoic Era have been exposed and the different coloring and erosive characteristic of these formation have caused the interesting geologic formation which are seen in the Canyon.

Streamflow and Water Quality: The section of Oak Creek that is being considered for designation has not been monitored for the rate of stream flow. A USGS gauging station is located south of the area approximately one mile down stream at the junction of Oak Creek and state highway 179. The station was put into operation in October, 1981 and has been continuously monitored stream flow. The average rate of flow of Oak Creek at this location is 61.4 cubic feet per second (cfs) over a nine year period, with the lowest daily flow of 19 cfs occurring in 1986.

Oak Creek has been designate a Unique Water by the State of Arizona. As such degradation of water quality is strictly prohibited.

Vegetation: The riparian vegetation along the creek is diverse, healthy, and abundant. The vegetation includes Arizona Alder, Ash, Sycamore, Arizona Walnut, Cottonwood, Big Tooth Maple and Boxelder intermingled with blackberry and other understory plants.

The landscape beyond consists of Ponderosa Pine and Gambel Oak Forests giving way to Pinyon Pine and Juniper Woodland on the drier slopes. Chaparral brush fields consisting of Turbinella Oak, Buckbrush and Manzanita dominate the driest sites on the south and west facing slopes.

The Casner Canyon Research Natural Area is partially located within the stream corridor. The area was established in 1973 and contains a pure stand of Arizona Cypress along with some chaparral. Known threatened, endangered and Forest Service sensitive species include the Arizona bugbane and Flagstaff pennyroyal.

Fisheries and Wildlife: The native fish fauna is comprised of speckled dace, desert suckers, and Sonora suckers. With its easy accessibility, this reach is a very popular sport fishing area and the Arizona Game and Fish Department regularly stocks it with catchable size rainbow trout. This area also supports a wild population of brown trout. Prior to the introduction of these exotic trout, the upper reaches of Oak Creek reportedly supported Gila trout, a federally endangered species. Unable to withstand increased fishing pressure and the introduction of non-native trout, the Gila trout disappeared from the drainage sometime after the turn of the century. Another native fish which has seen its numbers decline in this reach is the roundtail chub, which is now a candidate for federal listing.

The extremely high diversity of habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the common black hawk, Mexican spotted owl, occult little brown bat, narrow-headed garter snake, and Mexican garter snake. The area within the canyon adjacent to Oak Creek also provide habitat for the northern goshawk and American peregrine falcon.

The area provides habitat for game species such as elk, deer, black bear and mountain lion. The riparian community associated with Oak Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Visual Resources: Oak Creek is in the Congressionally designated Oak Creek Canyon Scenic Area (P.L. 70). The Canyon is nationally known for its spectacular red rock formations and Highway 89A was designated as the first State Scenic Highway in Arizona. The outstanding red rock buttes contrasted by dark green conifers and riparian vegetation makes Oak Creek Canyon one of the most photographed areas in Arizona. Oak Creek offers outstandingly remarkable scenic values.

Heritage Resources: As a complete drainage, Oak Creek is similar to other perennial streams in the Verde Valley, forming an oasis that attracted human occupation over the centuries. However, due to its segmentation by privately owned land, it can only be considered of moderate heritage value. Segment # 1, is rated at low to very low potential site density, with a fair degree of reliability. With the exception of a few small prehistoric petroglyph sites of the Southern Sinagua, sites here are all from the historic Euroamerican uses of the canyon, consisting of the state fish hatchery, Forest Service camp grounds, early homesteads and a possible construction camp associated with the building of U.S. Highway 89, which parallels Oak Creek. Related to this construction is Midgely Bridge, listed on the National Register of Historic Places. The sites of two early day lodges, located near the mouth of the West Fork of Oak Creek, reflect the development of tourism in Oak Creek Canyon. Mayhew Lodge first operated about 1970 and was a popular destination for many celebrities of the 1920's through the 50's. It was listed on the National Register Of Historic Places until it burned down in 1980. The area was the setting of one of the most famous westerns of all time, "Call Of the Canyon", written by Zane Grey. Call of the Canyon Lodge, named after the Zane Grey novel, was operated as a tourist lodge from about 1927 to 1945. It was removed in the 1960's.

LAND USES AND DEVELOPMENT

Landownership:

The creek is located on the Coconino National Forest. Private parcels are many.

<u>RIVER MILES</u>	<u>NF ACRES</u>	<u>STATE PARK</u>	<u>PRIVATE</u>	<u>TOTAL</u>
13	3370	50	450	3870

This segment of Oak Creek has private land on one side and National Forest on the other for .5 miles, private land on both sides for 2.0 miles, Slide Rock State Park for .6 miles, and Coconino National Forest for 9.8 miles. Approximately 800 acres of the stream corridor is Congressionally designated wilderness.

Water Rights and Water Resource Development: Oak Creek Canyon was settled prior to the area being designated as a national forest. There are a number of private land holdings along the creek that have active water rights allocations who may divert water out of the channel for irrigation and domestic uses. In 1985 Coconino NF applied for an "instream flow" water right of six cfs, to insure the presents of water to maintain habitat for fish and wildlife. This figure is based on a measured low flow that occurred in 1940 at the Cornville gauging station.

The Coconino NF presently has no plans of developing any new consumptive uses of river water within the Oak Creek corridor. The forest does have both springs and wells in the canyon that are used for recreation developments.

This segment has three diversions for irrigation ditches that serve Slide Rock State Park and Junipine and Forest Glen resorts. Garlands Resort waters their trees with water pumped from the creek.

Transportation Facilities: Access to the area is via US Highway 89A. Access roads within the Canyon are limited to short paved and dirt roads which lead to NF recreation sites, private subdivisions, motels and summer home areas. There are ten (10) Forest Service System foot trails which for the most part go from the creek to the top of the Rim. There are two major bridges spanning Oak Creek in the segment. There are nine total "low water crossings of Oak Creek in the study area. Five are on private land and four are on National Forest Land. There are also three "foot bridges", one cable suspension crossing and one washed out minor bridge. All of these except for one of the "foot bridges" are on private land.

The Highway enters the corridor north of Sedona and follows the creek to the head water springs near Sterling Springs Fish Hatchery where it leaves the Canyon in a series of switch-backs. The Wilson Mountain National Recreation Trail is within the study are. US Hwy. 89A was designated as the first scenic highway in Arizona.

Recreation Activities: Oak Creek Canyon receives very heavy recreation use with over five million visits per year largely due to the location of the major highway which runs the entire length of the segment. There are twelve developed sites including five campgrounds, three picnic areas, two swim areas, one developed trailhead, one State Park, ten Forest Service System Trails, seven motel/resorts, one summer camp and one public trout farm. There are 106 parking pullouts along the thirteen mile long highway which can accommodate 1030 vehicles. The publicly owned developed recreation sites in the canyon have a design capacity of 604 vehicles and 2406 people at one time.

Developed Sites:	# Sites
Midgely Bridge Picnic Area	2
Grasshopper Pint Swim Area	29
Encinosa Picnic Area	12
Manzanita Campground	19
Slide Rock State Park	141
Slide Rock Swim Area	--
Halfway Picnic Area	10
Banjo Bill Campground	8
Bootlegger	10
Call-of-the-Canyon Day Use Area	57
Cave Springs Campground	78
Pine Flat Campground	58
Total 424	

Popular recreation activities include camping, picnicking, sight seeing, fishing, hiking, and swimming. Recreation is an outstandingly remarkable value in Oak Creek Canyon. The Canyon is one of the most heavily visited recreation areas in Arizona. The estimated annual use is 1,300,000 visitor days (visitor day equals 1 person for 12 hours).

Current Special Management Designation: The Oak Creek corridor is adjacent to the Red Rock-Secret Mountain Wilderness with about 800 acres being included in the wilderness area.

Mining: The following mineral withdrawals are in effect in the study corridor:

U S 89A Roadside Zone	850 Ac.
Banjo Bill Forest Camp	88 Ac.
Manzanita Forest Camp	80 Ac.
Pine Flat Forest Camp	186 Ac.
Bootlegger Forest Camp	40 Ac.
Grasshopper Point Swim Area	103 Ac.
Red Rock/Secret Mountain Wild.	800 Ac.
TOTAL	2147 Ac.

There are no mineral production sites, mining claims, geothermal sites or oil and gas leases in the study corridor.

Mining activities in Oak Creek and the Sedona area are specifically addressed in the Act of May 24, 1949 (63 Stat. 76,16 USC, as amended) for the purpose of protecting scenic values. While mining is not prohibited, converting to private ownership is, and there are some restrictions on the amount of disturbance and the control of public access.

Special Land Uses:

Facilities under Forest Service Special Use Permits or Easements:

- 8 Telephone & Power Transmission Lines
- 5 Water Pipelines & Spring Boxes
- 1 Water Diversion (irrigation ditch)
- 1 Fence
- 1 Road Easement (Ariz. Dept. of Transp. US 89A)
- 5 Road Special Use Permits
- 1 Fish Hatchery
- 2 Gauging Stations

Livestock Grazing and Agriculture: There are no grazing allotments in the stream corridor. Fruit orchards provide the only agriculture in the Oak Ck. study corridor. Most of the original orchards are now on National Forest Land where they are gradually dying and the areas are reverting back to native vegetation. Managed orchards still exist at Slide Rock State Park and at Garlands Resort.

Timber Harvest: Lands within the corridor are listed as not suitable. Campers are allowed to harvest fuelwood for campground use and a limited number of permits are issued to the public to remove flood debris fuelwood.

SOCIAL AND ECONOMIC VALUES

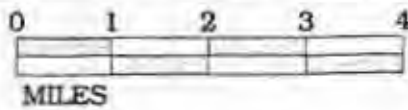
Oak Creek Canyon has a major economic impact on both Sedona and Flagstaff. Approximately sixty percent of the developed recreation site visitors come from Arizona, twenty percent from California and twenty percent from other areas. Scenic beauty and relief from the heat of the Phoenix Valley are the most common reasons given for visiting Sedona and Oak Creek Canyon. Recreation and tourism are the primary factors driving the economy of the Oak Creek Canyon area. There are 159 cabins, cottages and motel units for rent in Oak Creek Canyon. There are also three restaurants, two convenience stores and one jewelry store. Many commercial bus tour companies drive through Oak Creek Canyon on their way to or from the Grand Canyon.

There are numerous private cabins and summer homes in Oak Creek with high associated land values.

The Sterling Springs Fish Hatchery at the north end of the study area is used to incubate, hatch eggs and grow trout to "fingerling" size for transfer to the Page Springs Fish Hatchery (the largest in Arizona) which is along lower Oak Creek. The Sterling Springs Fish Hatchery is under a special use permit to the Arizona Game and Fish Department.

WEST FORK OF OAK CREEK

WEST FORK OF OAK CREEK



WEST FORK OF OAK CREEK

LOCATION:

The West Fork of Oak Creek is located on the Coconino National Forest in Coconino County. The origin is just north of the Mogollon Rim in Section 14, Township 19 North, Range 5 East from where it flows southward for a distance of approximately 10 miles to its confluence with Oak Creek proper in Oak Creek Canyon. Both the West Fork and Oak Creek are part of the Verde River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION:

The entire length of the West Fork was evaluated for potential Wild and Scenic River designation. The stream was found to possess outstandingly remarkable values and the entire 10 miles was deemed potentially eligible with a wild classification. A total of 2,700 acres, all National Forest lands, are located within the stream corridor.

The following values were identified as outstandingly remarkable:

1. **Scenic Values** - The dramatic geologic formations with their red, tan and grey color tones, and the diverse vegetation all combine to make the West Fork of Oak Creek nationally recognized for its spectacular scenery. This is easily identified as an outstandingly remarkable value.
2. **Recreational Value** - The entire length of the West Fork is within the Red Rock Secret Mountain Wilderness and it provides a remarkable recreational opportunity which is being utilized by large numbers of Forest visitors.
3. **Geological Values** - The West Fork of Oak Creek has incised the Mogollon Rim and exposed a great deal of the geologic history of Arizona. The geologic features created by the process of erosion are spectacular and varied. The sheer cliffs, spires and buttes all are dramatic evidence of the geologic process.
4. **Heritage Values** - The mouth of West Fork was the location of the Call of the Canyon Lodge where Zane Grey wrote the novel by the same name, using West Fork as the setting.
5. **Riparian Values** - The quantity, quality and diversity of this resource make this resource value remarkable.
6. **Ecological Values** - This stream passes through the 1717 acre Research Natural Area designated in 1931. The research natural area recognized the ecological importance of this willow/boxelder community in terms of providing unusual ecological niches.

DESCRIPTION OF RESOURCES AND VALUES:

Geology: The West Fork of Oak Creek like the main canyon itself reveals some 300 million years of geologic history. It displays evidence of past landscapes which are very different than those we see today. The Kaibab Limestone layer was deposited 250 million years ago when the area was a warm shallow sea. Only 10 million years previous to that the area was a desert that resulted in Coconino Sandstone formation.

These different sedimentary layers have been eroded by the West Fork to create the different colorings and geologic formations that are displayed so dramatically in the canyon.

Streamflow: The flow rate for the West Fork has not been determined and no information is presently available. The West Fork is a perennial stream.

Vegetation: The corridor includes the West Fork of Oak Creek Research Natural Area. The RNA has a willow/box elder community and the adjacent canyon walls. The RNA was established in 1931 and includes 1,171 acres. The RNA was set aside to preserve a representative sample of a willow/boxelder ecological community primarily for scientific and educational purposes.

Arizona Bugbane (*Cimicifuga arizonica*) exists in the West Fork area. It is a Forest Service Sensitive and Category One species, according to the Fish and Wildlife Service. Flagstaff Penny Royal (*Hedeoma diffusum*) also exists in the area. It is listed as a Forest Service sensitive and a Category 3C species. Known threatened, endangered and Forest Service sensitive species include Category One species. Aside from the few species that are officially recognized as being rare or threatened, the area is very interesting to biologists as it represents the Northern and Southern limits of many species. For example some 32 species of ferns occur in the canyons and on the slopes.

The area is outstandingly remarkable for its riparian and ecological values, due to its unique combination and variety of plant species.

Timber species present include Ponderosa Pine and Douglas Fir. These species are listed as being on lands not appropriate for timber harvest.

Fisheries and Wildlife: A major tributary to Oak Creek, the West Fork supports a native fish community similar to that found in the main stem. Speckled dace, desert sucker, and Sonora sucker can be found inhabiting its waters. It is also likely that Gila trout, a federally endangered species, could once be found here. Today, the trout inhabiting the West Fork of Oak Creek are exotic species such as rainbow and brown trout.

West Fork of Oak Creek: The extremely high diversity of habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the American peregrine falcon, Mexican spotted owl and Flagstaff pennyroyal. The area within the canyon adjacent to West Fork of Oak Creek also provide habitats for the northern goshawk and Mexican spotted owl.

The area provides habitat for game species such as elk, deer, black bear and mountain lion. The riparian community associated with West Fork of Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Visual Resources: The West Fork of Oak Creek includes spectacular red, tan and buff cliffs which plunge dramatically into the canyon. The stark contrast of the massive cliffs, dark green mixed conifer forests, running water and towering deciduous trees along the creek offer an outstandingly remarkable scenic value. The visual quality objective for this area is preservation of the characteristic landscape.

Heritage Resources: With the exception of the area at its mouth, the West Fork of Oak Creek has little heritage value. Its entire course is rated as very low to low in potential site density with a high degree of reliability. A single small cave is the only prehistoric site known along its course. The area at its mouth is within the Oak Creek segment and is discussed in the Oak Creek report.

LAND USE AND DEVELOPMENT:

Landownership:

The creek is located on the Sedona Ranger District of the Coconino National Forest. There are no private parcels.

River Corridor Acreage

	<u>RIVER MILES</u>	<u>NF ACRES</u>	<u>TOTAL ACRES</u>
Segment #1	10	2700	2700

Water Rights and Water Resource Development: There are no private water rights that exist on the West Fork. The Coconino National Forest controls all access to this stream.

Transportation Facilities: The creek is accessible only by the West Fork Trail. The trailhead is located adjacent to Highway 89 and the trail itself extends 3 miles up the stream course on a gentle grade. Recreation use on the trail is heavy.

Recreation Activities: Recreation use is heavy with approximately 5,000 visitors per month. Over 1,000 people visit the area on peak use days when parking lots get jammed with vehicles which overflow onto the shoulders of U.S. 89A. The area is outstandingly remarkable for recreation because it offers a cool, easy walk along a constantly flowing stream with beautiful scenery and opportunities for shallow water play.

A Forest Supervisor's Closure Order is in effect for the West Fork area prohibiting camping and campfires along the first six miles. Horses are also prohibited in the area due to potential damage to the vegetation and waterway of the creek. The incredible variety of vegetation as well as the unique geological features of the canyon also attract recreationists.

Current Special Management Designation: The West Fork of Oak Creek with the exception of a minor amount of acreage at the confluence with Oak Creek proper is all within the Red Rock-Secret Mountain Wilderness as designated by the Arizona Wilderness Act of 1984. About 1250 acres are within the research natural area.

Mining: All but the very mouth of the West Fork is withdrawn from mineral entry by the Wilderness Act of 1984 (or previously for those acre within the research natural area. The area has no mining claims, geothermal or oil and gas leases. There are no mineral production sites or quarries in the study area. Approximately 1250 acres of the study area is withdrawn from mineral entry for the West Fork of Oak Creek Research Natural Area.

Special Land Uses: Facilities under Forest Service special use permits or easements:

- (1) gauging station, AZ. Dept. of Water Resources

Livestock Grazing and Agriculture: There are no grazing allotments, or range improvements located in the study area.

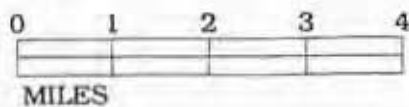
Timber Harvest: Timber harvesting is not allowed in the West Fork of Oak Creek because the area is in a congressionally designated wilderness area.

SOCIAL AND ECONOMIC VALUES:

The West Fork is an important tributary to Oak Creek. Local visitors are from the communities of Flagstaff, Sedona and the Verde Valley. The scenic beauty and ease of access make this canyon a very popular visitor destination to people from other areas of Arizona as well. For most people, the West Fork is probably thought of as one of attractions of Oak Creek, and from that standpoint is of major social significance, although not necessarily of major economic importance.

SYCAMORE CREEK

SYCAMORE CREEK



SYCAMORE CREEK

LOCATION

The portion of Sycamore Creek being considered for Wild & Scenic River designation forms the boundary between the Prescott and Coconino National Forest. It is located in both Coconino and Yavapai Counties. The origin of Sycamore Creek is just south of Fomroy Tank in Section 1, Township 20, Range 3 East where the Creek forms Sycamore Canyon and flows southward, approximately 24 miles, to its confluence with the Verde River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

Approximately 4 miles of Sycamore Creek were evaluated for Wild and Scenic River eligibility. The segment considered runs from Parson Springs south to the confluence of the Verde River. It was determined to be potentially eligible with a wild classification. About 1200 acres are contained within the stream corridor; 120 acres are private land, 500 acres are on the Prescott National Forest and 580 acres are on the Coconino National Forest. The segment is free flowing without impoundments or diversions.

The following values were identified as outstandingly remarkable:

1. Recreational Values - Sycamore Creek is located within the Sycamore Canyon Wilderness and offers a non-roaded recreation setting that is fairly accessible.
2. Fisheries Habitat Values - Sycamore Creek has been identified by the U. S. Fish and Wildlife Service as having the possibility to provide critical habitat for the Spikedace *Moxostoma valenciennesi*.
3. Riparian Values - The broad belt of riparian which borders Sycamore Creek is remarkable in terms of quantity, quality and diversity.

DESCRIPTION OF RESOURCES AND VALUES

Geology: The geologic characteristics of Sycamore Canyon are typified by flat-lying sedimentary rocks of the Paleozoic Era. Most of the formations which outcrop here also out crop in the Grand Canyon forming similar beautiful cliffs. These sedimentary rocks include thick formations of limestone, siltstone and shale. They are overlaid locally by gravel and basalt flows of Tertiary and Quaternary Age, all of which have been eroded and transported by Sycamore Creek itself.

Streamflow: The Coconino NF has recently started to monitor the rate of water flow in Sycamore Creek, but with only two months of data it is premature to estimate flow rates. More information will become available over the next few years. This portion of Sycamore Creek is a perennial stream.

Vegetation: The stream course is a hardwood complex, riparian vegetation type. The riparian vegetation occupies most of the half mile width of the stream corridor. The riparian vegetation in the corridor is outstandingly remarkable because of its quantity and diversity of species which includes Arizona Sycamore, Arizona Alder, Arizona Walnut, Fremont Cottonwood and Willows growing near the streambanks. The riparian vegetation mingles with Arizona White Oak, Shrub live Oak chaparral and Pinyon Juniper Woodland along the fringes of the study segment.

The area has outstandingly remarkable ecological values because of the rare ecological habitat present at Parson's and Summer's Springs and the broad riparian forest which is dependent on the slow flowing waterway. The vegetative variety in the canyon results in complex ecological associations.

There are no timber species present.

The only Forest Service sensitive species located in the area is Erigeron saxatilis.

Fisheries and Wildlife: As with many streams which drain the Coconino National Forest, Sycamore Creek provides important habitat for the protection and management of Arizona's native fishes. Native fish which have been collected in the proposed Wild and Scenic River reach include roundtail chub, a candidate for federal listing, spikedace, which are federally listed as threatened, Sonoran suckers, desert suckers, longfin dace, and speckled dace. The U.S. Fish and Wildlife Service is currently working on a proposal to designate the lower portion of Sycamore Creek as critical habitat for the spikedace.

The high diversity in habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species.

The area provides habitat for game species such as deer and javelina. The riparian community associated with Sycamore Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Visual Resources: Sycamore Creek is a lovely riparian canyon that attracts many birds during the spring and summer. The trailhead, overlooking the study area, offers a colorful view of the riparian waterway with rough canyon walls above it. The most striking visual resource is the beautiful, wide riparian forest along the creekway, the quiet pools and the visual images offered by Parsons and Summer's Springs as they form Sycamore Creek.

The mouth of Sycamore Creek is visible from the Verde River Canyon Excursion Train which carries tourists from Clarkdale to Perkinsville daily.

Heritage Resources: Although only of low reliability due to a lack of archaeological survey data, the site density is predicted to be high for this segment and includes an important cross section of Southern Sinagua prehistory. Sites range from very early pit house settlements, dating to about A.D. 700, to large Tusigoot Phase pueblos of 30 or more rooms, dating to A.D. 1300 to 1400. Smaller cliff dwellings are scattered up and down the canyon. Besides these prehistoric sites, several historic sites are known and include a mine from the 1930's and a small mine tunnel that is probably much earlier.

LAND USES AND DEVELOPMENT

Land Ownership: The creek is located in the Prescott and Coconino National Forests. There is only one private parcel, the Packard Ranch, which is located at the confluence of Sycamore Creek and the Verde River. The parcel is currently owned by Phelps Dodge Corporation, but the riparian area is under management through an agreement with the Arizona Game and Fish Department.

	<u>RIVER MILES</u>	<u>NF ACRES</u>	<u>PRIVATE</u>	<u>TOTAL ACRES</u>
Stream Corridor	4.0	1080	120	1200

Water rights and Development: The segment of Sycamore Creek that is being considered for the wild and scenic designation is mostly located in Sycamore Wilderness. The last half mile is located on the Packard Ranch property which may divert water from the creek for irrigation and domestic uses. The Coconino NF has filed an application for a instream flow water right of 3.3 cfs for the segment of the stream that is in wilderness.

Transportation Facilities: There is dirt road access to Packard Ranch. Access to the rest of the corridor is limited to two trails, the Parsons Trail and The Packard trail.

Recreation Activities: Recreation use in Sycamore is heavy, particularly in the Spring and Summer when recreationist from Cottonwood and Clarkdale flock to the large swimming holes. The area also receives moderate use by fishing enthusiasts. A Forest Supervisor's Closure order is in effect for this segment that prohibits overnight camping.

The recreation use of the area is primarily due to its close proximity to Cottonwood and Clarkdale and its yearlong recreation opportunity.

Current Special Management Designation: With the exception of the last half mile of stream which is on private land, all of the Sycamore Creek stream segment is located within the Sycamore Canyon Wilderness as designated by the Sycamore Canyon Wilderness Act of 1978.

Mining: The area does not have any mining claims or oil and gas leases. There are no mineral production sites or quarries in the study area.

Mineral Withdrawals:	
Water Power Designation Act 6-20-1910.	50 acres
Wilderness Act of 1984	1080 acres

Special Land Uses: There are no special use permits or easements in the stream corridor.

Livestock Grazing and Agriculture: The Coconino National Forest portion is within the Duff Mesa Unit of the Windmill grazing allotment but has not been grazed for over five years. The Prescott National Forest portion of the stream corridor is within the Antelope Hills and Perkinsville allotments and is currently grazed.

Timber Harvest: The area is not suitable for timber production.

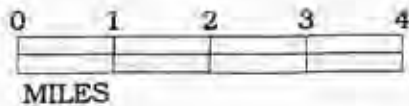
SOCIAL AND ECONOMIC VALUES:

Recreationists are mostly from Clarkdale, Cottonwood and other locations in the Verde Valley. The area receives regular use by the same individuals and families who return to the area again and again to fish and swim.

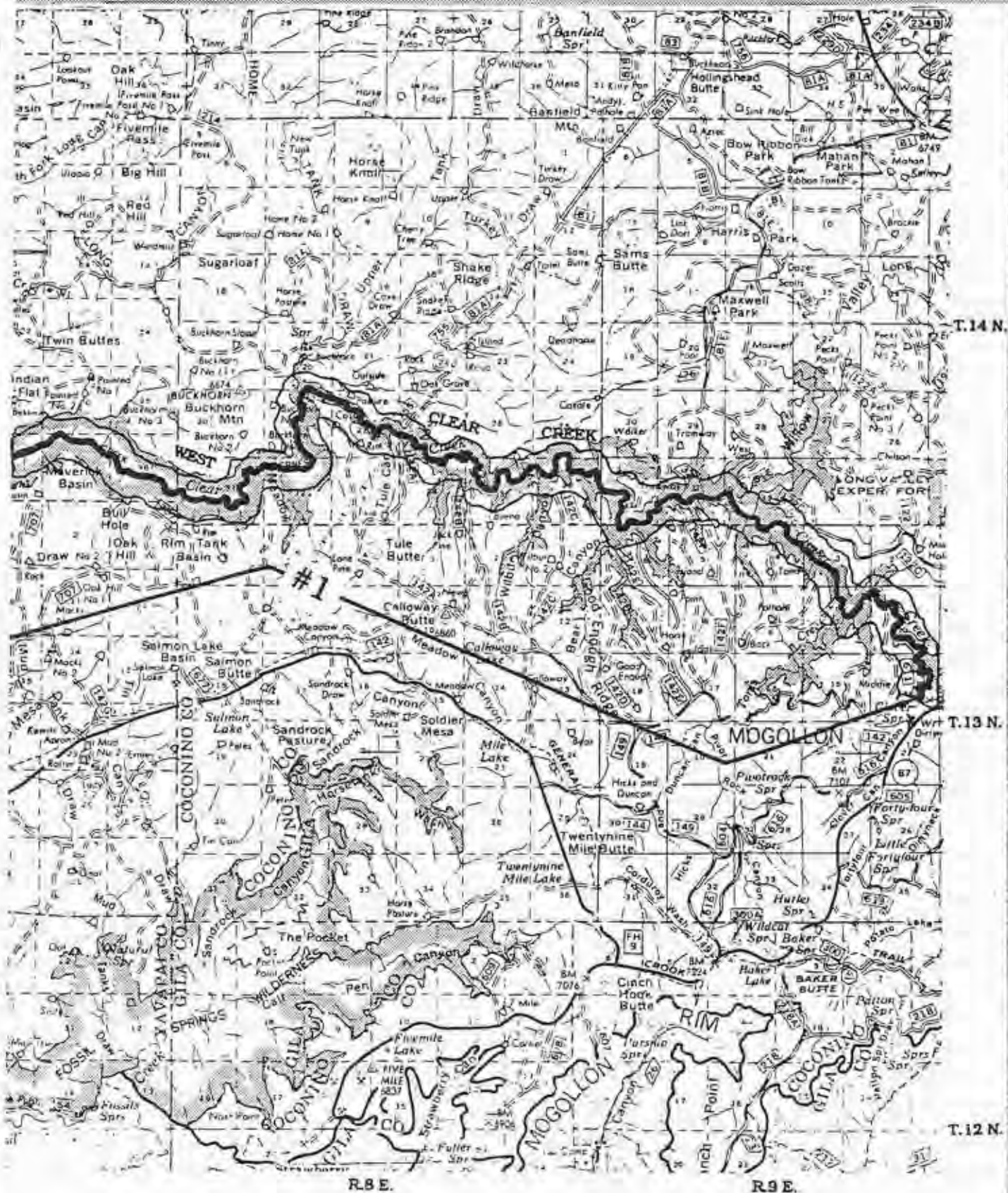
Sycamore creek is one of the main tributaries to the Verde River and is important to downstream water users. The area also has religious significance to the local Yavapai-Apache Tribe.

WEST CLEAR CREEK

WEST CLEAR CREEK



WEST CLEAR CREEK



WEST CLEAR CREEK

LOCATION

West Clear Creek is located on the Coconino National Forest in Coconino and Yavapai Counties. The origin is just north of the Mogollon Rim from where it flows southward for approximately 43 miles to its confluence with the Verde River as apart of the Verde River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

The whole length of West Clear Creek in three segments was evaluated for potential Wild and Scenic River designation. The first segment was entirely within the West Clear Creek Wilderness from the headwaters in Section 14, Township 13 North, Range 9 East, to the wilderness boundary, a total of 32 miles. The second segment was from the wilderness boundary down stream to the dispersed camping area at Clear Creek Campground, 6.2 miles distance. The third and final segment was from the campground to the confluence of the Verde, 4.8 miles in length.

Segment 3 had no outstandingly remarkable values identified and was not considered further. Segment 1 and 2 were found to possess outstandingly remarkable values and were therefore potentially eligible. Segment 1 with a wild classification and segment 2 with a scenic classification. The stream corridor for Segment 1 contains a total of 9,000 acres which is all National Forest land. Segment 2 contains 1,900 acres which is also all National Forest land. Both segments are freeflowing without diversions or impoundments.

The following values were identified as outstandingly remarkable:

1. **Scenic Values:** West Clear Creek in the upper reaches of the canyon is lush in vegetation with a great deal of diversity creating a mosaic of color and texture. The interesting red rock formations add to the scenic values. The lower segment, #2 is a riparian ribbon through a semi-desert landscape but is not outstandingly remarkable.
2. **Recreational Values:** Segment 1 offers fishing and hiking in a rugged primitive setting. Segment # 2 offers water-based recreational opportunities in an arid landscape. Both are deemed outstandingly remarkable.
3. **Geologic Values** - West Clear Creek like other canyons of the southern Coconino National Forest has incised the Mogollon Rim and exposed a great deal of the geologic history of Arizona. The geologic features created by the process of erosion are spectacular and varied. This occurs most prominently in Segment # 1 along the Rim itself which marks a division between the Colorado Plateau and the Transition Zone, two of the three major geologic zone of the state. For this reason this value was deemed outstandingly remarkable in Segment 1.
4. **Wildlife Values:** The segment within the wilderness provides habitat for nesting Black Hawks and River Otters and is very important for migrating neotropical birds. Segment 2 is also important to these birds.
5. **Riparian Values:** The amount and quality of riparian vegetation constitutes an outstandingly remarkable resource value in both segments.
6. **Ecological Values:** The canyon ecosystem and the variety of ecological niches it provides make this an outstandingly remarkable value in Segment 1.
7. **Heritage Values:** The lower portion of Segment 1 and all of Segment 2 contain significant cultural resources sites, including the Clear Creek Ruins, which is listed on the National Register of Historic Places, as well as the Calkin Ranch and the Verde Ball Court Sites both of which are Register eligible. Segment 2 contains portions of the General Crook Military Road and the 1930's era Clear Creek Ranger Station and CCC Work Camp, both significant from a historical standpoint.

DESCRIPTION OF RESOURCES AND VALUES

Geology: Both Paleozoic and Mesozoic rocks are exposed in the canyon walls of West Clear Creek Canyon. In descending order going downstream the Kaibab Formation, Coconino Sandstone, and the red rocks of the Supai Formation have all been exposed and shaped into a variety of interesting geologic formation. The lower stretch of West Clear Creek, Segment 2, enters the Verde Valley, which is a down-dropped valley in which the formation are much younger than those up stream.

Streamflow: The section of West Clear Creek that is being considered for designation has been monitored for the rate of stream flow for a period of 23 years. A USGS gauging station is located at the site of the old Bull Pen Ranch (NW, NW, Section 11, T13N, R6E) at the lower end of segment one. The station was put into operation in Oct., 1966 and continuously monitored stream flow until Oct., 1989, a period of 23 years. The mean flow rate was 67 cfs over the period of operation. Both segments are freeflowing without impoundments. Segment 2 has one diversion for an irrigation ditch.

Vegetation: Segment 1 - The dominant riparian vegetation is ash, walnut and willow, but there are canopies of wild grape and thick patches of shrubs as well. The slopes above are dominated by ponderosa pine with a sprinkling of piñon and juniper on the south aspects and mixed conifer on the more moist north aspects.

Segment 2 - This segment is a more typical desert riparian area with cottonwood, sycamore and alder being the dominant trees. The slopes above the stream form a transition zone dominated by piñon and juniper on the higher elevations. Further down the riparian zone is bordered by mesquite and hackberry, which then gives way to catclaw, scrub oak and prickly pear.

Fisheries and Wildlife: Today, through intentional and un-intentional introductions, West Clear Creek contains a number non-native fish species. Rainbow trout, green sunfish, red shiner, mosquito fish, and others can be found in various parts of the drainage. The Arizona Game and Fish Department currently identifies portions of West Clear Creek as wild trout management areas.

Fish - Segment 1: The high quality habitat in this remote reach is home to a number of native fishes including roundtail chub which is a candidate for federal listing, speckled dace, and desert suckers. Reportedly this reach once supported Gila trout which are federally protected as an endangered species. The demise of Gila trout within the West Clear Creek drainage is largely attributed to the introduction of non-native trout around the turn of the century.

Fish - Segment 2: Below Bull Pen Ranch a number of other native fish species can be found. In addition to the roundtail chub, speckled dace, and desert suckers, the lower reach supports Sonora suckers, longfin dace, and at one time spikedace, a federally threatened species. West Clear Creek from its mouth to the General Crook highway bridge is also being proposed as critical habitat for razorback suckers, a federally endangered species.

Wildlife - Segment 1: The extremely high diversity of habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the common black-hawk, American peregrine falcon and Mexican spotted owl. The area within the canyon adjacent to West Clear Creek also provides habitat for the northern goshawk and wintering bald eagles.

The area provides habitat for game species such as deer, black bear and mountain lion. The riparian community associated with West Clear Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Wildlife - Segment 2: The high diversity in habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the common black-hawk and wintering bald eagle.

The area provides habitat for game species such as deer and javelina. The riparian community associated with West Clear Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Visual Resources: Segment 1 - The verdant canyon bottom winds narrowly between red & grey bluffs and steep side slopes, a lush thread of green dotted with reflective blue pools. Combined with the darker timber vegetation on the slopes and numerous rock outcrops the form, line, color and texture provide a rich and varied landscape.

Segment 2 - This lower segment is a more typical riparian green ribbon contrasting with the moderately rugged desert landscape through which it passes.

Heritage Resources: The lower, western half of West Clear Creek is of very significant cultural value (that is, Segment 2, and approximately half of Segment 1). This stretch of the stream begins with a wide flood plain, framed by hills, bluffs, and extensive flat mesa-tops. It then flows eastward and becomes steeply entrenched into an ever more narrowing canyon. Site densities throughout this western half are high to very high with moderate to excellent reliability. Sites are of the Southern Sinagua tradition and cover almost every site type known for A.D. 900 to 1400 in the Verde Valley - lithic sites, fields, field houses, small pueblos, large pueblos, rock art, and pit house sites. Particularly significant sites along this stretch include the Clear Creek Ruins, listed on the National Register of Historic Places, and the Calkins Ranch and Verde Ball Court Sites, Register eligible sites. As the canyon becomes more entrenched, "forts", cliff dwellings, rock shelters, and cavates become more frequent in occurrence, although other site types continue to occur. Historic Euroamerican sites are also present and include the General George Crook Military Road (determined eligible for the National Register), and the historic archaeological site of the 1930's era Clear Creek Ranger Station and CCC Work Camp. In the eastern half of Segment 1, as elevations rise and the canyon becomes even steeper, site density decreases to a low to moderate ranking, but with a poor reliability for this prediction. Prehistoric sites in particular are predicted to be rare in this area although a few historic Euroamerican sites likely occur.

LAND USES AND DEVELOPMENT

Land Ownership: Segment 1, the headwaters down to the West Clear Creek Wilderness Boundary is 100 percent National Forest System land, and part of the Coconino National Forest.

Segment 2 is similarly all National Forest System land and Coconino National Forest.

Water Rights and Water Resource Development: The section of West Clear Creek that is being considered for designation all lies within the Coconino National Forest. No private interest has control of any water rights within the forest that can affect the flow of water in the two segments being considered for the Wild and Scenic River designation. The Bull Pen Ranch, at the west boundary of the wilderness, has irrigation water rights for 420 acre feet of river water. The forest service acquired these water rights with the land.

Transportation Facilities: Segment #1 is only accessible by horse and foot trail since it is included in its entirety in the West Clear Creek Wilderness. Following the stream channel requires swimming in places as the water sometimes pools bluff to bluff.

Segment 2 is accessible by road at two points: at Bull Pen via Forest Road 215, above the West Clear Creek Campground via Forest Road 626.

Recreation Activities: Segment 1 provides a full range of dispersed and wilderness recreation opportunities. Visitors to the area come to enjoy the outstanding scenic values, to fish, to swim and all variety of non-motorized water play, to hike, to enjoy the solitude, to cool off in the summer months, and to enjoy the dynamic canyon.

Recreation activity along Segment 2 is much more linked to motorized access. Visitors to this segment typically camp at Bull Pen, or they drive in for the day to swim, enjoy a stroll up the creek, sightsee, or fish.

Current Special Management Designation: Segment 1 is located all within the West Clear Creek Wilderness as designated by the Arizona Wilderness Bill of 1984.

Mining: A search of the Bureau of Land Management microfiche, dated February 4, 1993, for mining claims shows that there are no mining claims in the area of West Clear Creek proposed for designation as a Wild and Scenic River.

Segment 1 is withdrawn from mineral entry by the Wilderness Act of 1984.

All of the proposed area is theoretically favorable for oil and gas production. Some exploratory drilling was done in the lower Oak Creek area in the 1960's, but no indication of gas or oil were discovered. There are no oil and gas leases on the Forest presently.

Segment 2 of the West Clear Creek is a part of the Verde formation. This formation blankets the floor of the Verde Valley. Gypsum occurs in the white sediments of this formation. Several gypsum deposits have been found in this far ranging formation, and a single mine east of Camp Verde seems to be filling the present needs for this mineral.

Special Land Uses: There are two land uses authorized on West Clear Creek. USGS has a gauging station on Segment 1 and there is a diversion on Segment #2 which transports water from West Clear Creek to a ditch for use in irrigating private land.

Livestock Grazing and Agriculture: Both West Clear Creek segments are part of the Buckhorn Livestock Grazing Allotment. Segment 1 is part of two pastures accessed through Blodgett Basin. Segment 2 is part of a third pasture in the vicinity of Bull Pen. All three pastures are grazed each year by about 25 bulls during the period November through February. Very little grazing occurs in the riparian areas.

Timber Harvest: There is no timber harvest in this area.

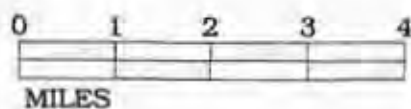
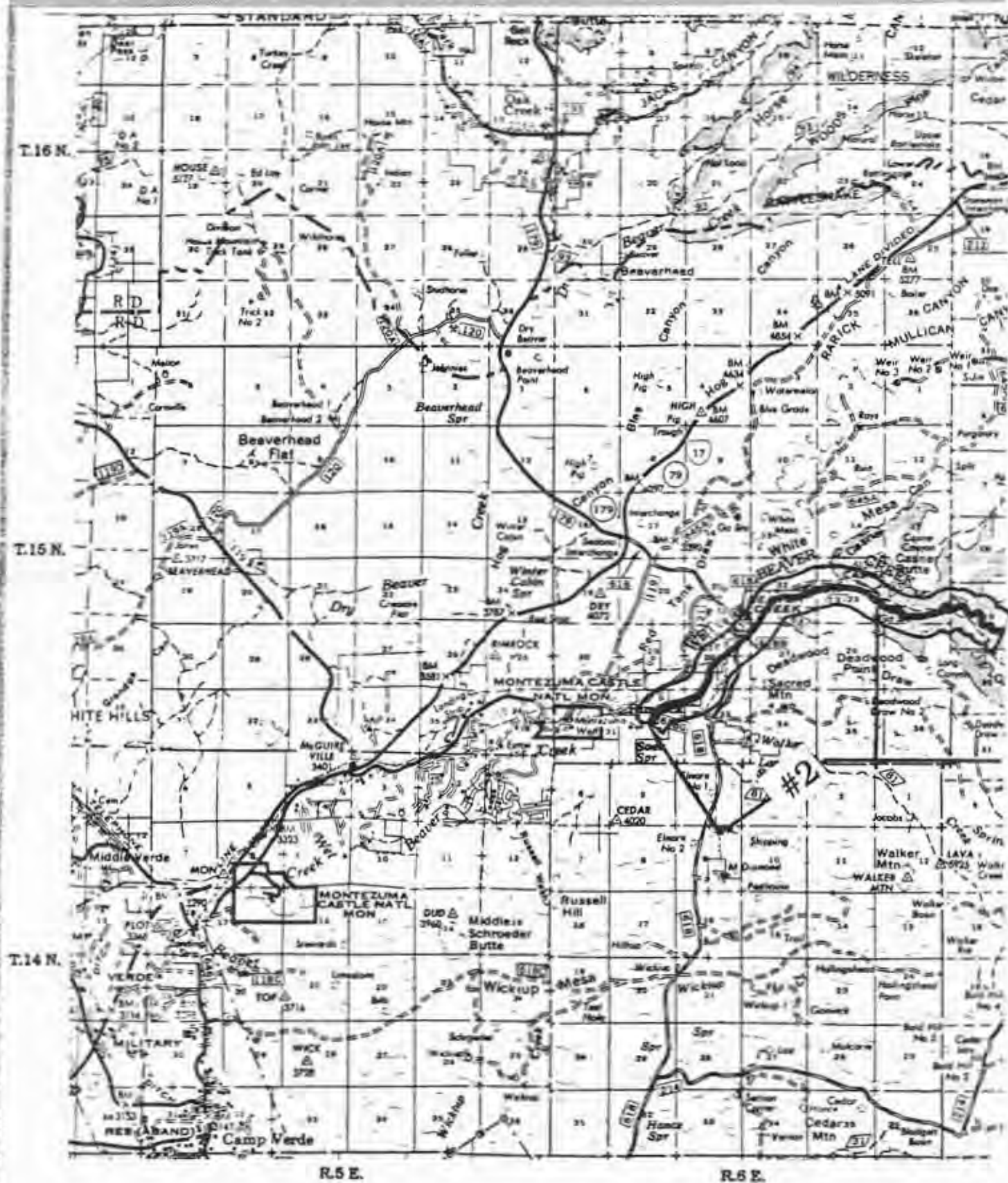
SOCIAL AND ECONOMIC VALUES

Based on limited observations by the District's Wilderness Rangers, it is estimated that an average of 40 people per weekend enjoy the opportunities afforded by both segments. Visitors include people from Phoenix as well as the local area.

While not a major economic component for the area, it is of significant social value both locally and regionally. Magazine articles have increased exposure of the areas uniqueness, particularly Segment 1. The combined attraction of the Bull Pen area and Clear Creek Campground may have some impact on the local economy.

WET BEAVER CREEK

WET BEAVER CREEK



WET BEAVER CREEK



WET BEAVER CREEK

LOCATION

Wet Beaver Creek is located on the Coconino National Forest in Coconino and Yavapai Counties. The origin is just north of the Mogollon Rim from where it flows southward for a distance of approximately 34.6 miles to its confluence with the Verde River as a part of the Verde River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

The whole length of Wet Beaver Creek was evaluated in three segments for potential Wild and Scenic River designation. The first segment was entirely within the Wet Beaver Wilderness from the headwaters in Section 16, Township 15 North, Range 8 East to the wilderness boundary just north of the Beaver Creek Ranger Station, a total of 12.9 miles. The second segment was from the wilderness boundary downstream to private land in Section 32, Township 15 North, Range 6 East, a distance of 4.3 miles. The final segment was from the private land to the confluence of the Verde, 17.4 miles. The first two segments were found to possess outstandingly remarkable resource values, but the third did not and is not considered further. Segment 1 which contains 3,900 acres of National Forest land, is potentially eligible with a wild classification. Segment 2, which contains 370 of private land and 1,000 acres of National Forest Land, is potentially eligible with a recreation classification.

Segment 1 is freeflowing without impoundments or diversions. Segment 2 is freeflowing but has diversions on both public and private land that sometimes affect streamflow.

The following resource values were identified as outstandingly remarkable:

1. **Scenic Values** - The diversity of vegetation, the color and form of the geologic formations and in the lower segment, Segment 2, the contrast of vegetation along the creek as opposed to the surrounding arid terrain all combine to create outstandingly remarkable scenic values.
2. **Recreational Values** - The unique wilderness recreational opportunities in Segment # 1 and the water-based recreation opportunities in Segment 2 are remarkable.
3. **Geologic Values** - Wet Beaver Creek has incised the Mogollon Rim and exposed a great deal of the geologic history of Arizona. The geologic features created by the process of erosion are spectacular and varied. This occurs most prominently in Segment 1 along the Rim itself which marks a division between the Colorado Plateau and the Transition Zone, two of the three major geologic zone of the state. For this reason this value was deemed outstandingly remarkable in Segment 1.
4. **Fisheries Values** - While not currently managed as such, Segment 1 of Wet Beaver Creek has a high potential for native fish habitat through restocking.
5. **Heritage Resource Values** - Segment 1 has a large number of archeological sites and Segment 2 has both archeological as well as historical sites including the Beaver Creek Ranger Station which is listed on the National Register of Historic Places as a prime example of depression-era architecture. These values are deemed remarkable in both segments.
6. **Riparian Values** - The amount, diversity and quality of the riparian vegetation adjacent to the stream make this value remarkable.
7. **Ecological Values** - The ecological values of the canyon environment in Segment 1 and the ecological niches created by the diverse stream-side environment in the arid surroundings of Segment 2 make this value remarkable.

DESCRIPTION OF RESOURCES AND VALUES

Geology: The headwaters of the creek flow across basaltic deposits of the Cenozoic Era. Down stream the erosive forces have cut through these recent volcanic deposits to reveal the sedimentary layers of the Paleozoic Era, such as Kaibab Limestone of the Permian Period and the older Supai Group of the Permian and Pennsylvanian Period which were deposited more than 300 million years ago. The lower portion of the creek, Segment 2, enters the down-dropped Verde Valley which was a lake in the Early Cenozoic Era. The formations cut by the creek in this segment are much younger than those up stream.

Streamflow: The section of Wet Beaver Creek that is being consider for designation has been monitored for the rate of stream flow for a period of 20 years. A USGS gauging station is located two miles up stream from the Beaver Creek Ranger Station (NW,SW, Section 24, T15N, R6E). The gauging station was put into operation in Oct. 1962 and continuously monitored stream flow until Oct. 1982. The mean flow rate was 35 cfs over the period of operation, with the lowest yearly mean flow rate of 7.56 cfs occurring in 1978.

Vegetation: The canyon bottom is characterized by a major perennial stream and riparian habitat. The dominant trees are cottonwood, sycamore, and elder, but you can also see ash, walnut and willow trees. Vines include wild grape and poison ivy.

The slopes above the stream forms a transition zone dominated by shrubs, pinyon and juniper. Immediately bordering the riparian band are mesquite and hackberry. These give way to a more arid zone of catclaw, scrub oak, prickly pear, and a variety of other shrubs, forbs, and grasses.

Fisheries and Wildlife: Originating from a series of springs, Wet Beaver Creek flows through a steep walled canyon for its first several miles. This remote, relatively undisturbed reach provides high quality habitat for roundtail chub, speckled dace, desert suckers, and Sonora suckers. Below this canyon reach, the native fish community is similar to that in the upstream reach, but longfin dace and at one time loach minnow a federally threatened species, could also be found.

Non-native fish species found in Wet Beaver Creek include rainbow and brown trout, smallmouth and largemouth bass, yellow and black bullhead, red shiner, and others.

Wildlife - Segment 1: The extremely high diversity of habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the American peregrine falcon. The area within the canyon adjacent to Wet Beaver Creek also provides habitat for the northern goshawk and Mexican spotted owl.

The area provides habitat for game species such as deer, black bear and mountain lion. The riparian community associated with Wet Beaver Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Wildlife - Segment 2: The high diversity in habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the common black-hawk.

The area provides habitat for game species such as deer and javelina. The riparian community associated with Wet Beaver Creek provides breeding areas, winter habitat and migration corridors for a large variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Due to the presence of perennial water the area's influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Visual Resources: The visual quality characterized by rocky canyon walls, a stream channel of red sandstone rocks and boulders, a riparian zone composed of an extensive variety of colors and textures of vegetation, crystal clear perennial water, and an enormous diversity and contrast between the stream zone and the bordering hills provide Outstandingly Remarkable Scenic Value. It has a full and rich spectrum of landscape form, line, color, and texture to yield an interesting landscape and outstanding visual quality.

Heritage Resources: As with the other streams in the Verde Valley, Wet Beaver Creek is also an area of considerable heritage significance. The western two-thirds of the Creek have a high to very high site density, with excellent reliability for this prediction. Numerous Southern Sinagua sites, dating between about A.D. 900 to 1400 are present, and include a wide range of site types including fields, pit house sites, canals, field houses, moderate to exceptionally large pueblos, rock shelters, caves, and cliff dwellings. Wet Beaver Creek is the focus for considerable activity during the last stage of the Sinagua, the Tuzigoot Phase of A.D. 1300 to 1400. Sites of this period have been most intensively studied along Wet Beaver Creek and include the famous sites of Montezuma Castle, Montezuma Well, and Sacred Mountain, just outside the Creek corridor. Some of the most important information about Sinagua agricultural practices has also come from studies of sites along Wet Beaver Creek, particularly at the Beaver Creek Fields site. Rock shelters and cavates are among the most common site types and increase in numbers to the east, as the canyon becomes steeper. However, site densities drop to a moderate level, with a very poor degree of reliability, in the easternmost fourth of the creek, in Segment 1. One historic period site of note also occurs in Segment 2. This is the Beaver Creek Ranger Station, a site listed on the National Register of Historic Places as an outstanding example of the Depression Era structures, and one of the few Ranger Stations in the Southwest Region that still generally maintains an appearance of historic integrity.

LAND USES AND DEVELOPMENT

Land Ownership: Segment 1, the headwaters down to the Wet Beaver Wilderness Boundary is 100 percent National Forest System land, and part of the Coconino National Forest.

Segment 2, from the Wet Beaver Wilderness Boundary downstream some 5 miles will be 90% National Forest if land exchanges in progress are completed.

The current land ownership is as follows:

	<u>NF LAND</u>	<u>PVT. LAND</u>	<u>TOTAL</u>
Segment 1	3,900 Ac.		3,900 Ac.
Segment 2	1,000 Ac.	370 Ac.	1,370 Ac.
Total	4,900 Ac.	370 Ac.	5,270 Ac.

Water Rights and Water Resource Development: Segment one of Wet Beaver Creek is all located inside the Wet Beaver Creek Wilderness and presently has no active water diversions or water rights that belong to any private individuals.

Segment two of Wet Beaver Creek runs through a mixture of private and national forest lands. The Coconino NF may acquire the water right for 13.44 acre feet through a land exchange involving a portion of private land that straddles the creek. Other private land holdings with water rights are diverting water from the creek which is resulting in sections of Wet Beaver Creek being dry during some periods of the year. There is also a diversion and drainage ditch in this segment for irrigating the grounds and pastures at the Beaver Creek Ranger Station. In 1985 the Coconino National Forest applied for an instream flow water right of 5.4 cfs for the section of creek that coincides with Segment 2.

Transportation Facilities: Segment 1 is only accessible by horse and foot trail since it is included in its entirety in the Wet Beaver Wilderness.

Segment 2 is accessible by road and trail at intermittent points: by trail in its upper 2 miles, by road at the Beaver Creek Campground via Forest Road 618, and by road at "Lawrence Crossing" via Forest Road 121.

Recreation Activities: Segment 1 provides a full range of dispersed and wilderness recreation opportunities. Visitors to the area come to enjoy the outstanding scenic values, to fish, to swim and all variety of non-motorized water play, to hike, and to enjoy the solitude.

Recreation activity along Segment 2 is much more linked to motorized access. Visitors to this segment typically camp at Beaver Creek, drive in for the day to swim, enjoy a stroll up the creek, sightsee, or fish. The 13 camp sites at Beaver Creek Campground are available year-round. The area is also popular for picnicking and swimming.

Current Special Management Designation: Segment 1 is located entirely within the Wet Beaver Wilderness as designated by the Arizona Wilderness Act of 1984.

Mining: There is little or no mining activity. Segment 1 is withdrawn from mineral entry by the Wilderness Act of 1984.

Special Land Uses: There are no special land use permits in Segment 1. In Segment 2 the Forest Service permits the operation and maintenance of a small water system for an adjacent land owner.

Livestock Grazing and Agriculture: Both Wet Beaver segments are part of the Beaver Creek Livestock Grazing Allotment. The upper segment #1 is within the wilderness and used only for watering livestock in drought years when water is not available elsewhere. It has seldom been needed.

The lower segment is only a portion of a larger pasture, and is grazed each winter for 30 days or less.

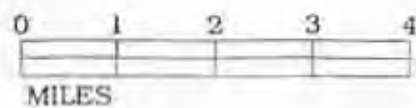
Timber Harvest: There is no timber harvest in this area.

SOCIAL AND ECONOMIC VALUES

The area's contribution to the local economy is relatively minor by itself, but cumulatively with other small forest attractions, it may have significance. It is likely of more importance to many people from the standpoint of wilderness and the relatively rare riparian ecosystem it supports.

UPPER VERDE RIVER

UPPER VERDE RIVER



This is a detailed topographic map of the Canyon Wilderness area in Colorado. The map features a grid system with numbers 1 through 36. Key geographical features include the Grand, Verde, and Antelope rivers, the Sycamore Basin, and the Black Hills. The map also shows various towns and landmarks, such as Woodchute, Silver Lake, and the Canyon of the Ancients. The map is labeled with "CANYON WILDERNESS" at the top and "WOODCHUTE" at the bottom. The map includes a grid system with numbers 1 through 36. The map is labeled with "CANYON WILDERNESS" at the top and "WOODCHUTE" at the bottom. The map includes a grid system with numbers 1 through 36. The map is labeled with "CANYON WILDERNESS" at the top and "WOODCHUTE" at the bottom.

R.3 E.

UPPER VERDE RIVER

LOCATION

NAME: Verde River, Yavapai County, Prescott and Coconino National Forests.

The Verde River originates in Big Chino Valley north of Prescott, Arizona, and is a major tributary of the Salt River, which flows into the Gila River. The river flows in generally a southerly direction for approximately 125 miles. A total 39.5 miles have previously been given Wild and Scenic River status.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 37.1 miles of the Upper Verde River from the National Forest boundary near Paulden, Arizona, to the north edge of private lands located in T17N, R3E, Section 33 near Clarkdale, Arizona, were evaluated for potential designation.

Eligible Segments:

37.1 miles from the National Forest Boundary near Paulden to Clarkdale.

Eligibility:

Upper Verde River - Free-flowing and without significant impoundments or diversions. There are 3 diversions used for irrigation which do not affect the free-flowing character of the river.

The outstandingly remarkable values are:

Fish/Wildlife and Cultural/Historic.

Fish/Wildlife: The riparian community and the river itself provides niches for many vertebrates. For example, 255 of the 383 vertebrates known to exist on the Prescott National Forest can be found along the river and its immediate environs. The presence of 16 threatened, endangered, or sensitive species is sufficient to support the unique status of this river segment. Of the 16 species, 1 is listed as threatened, 3 as endangered and 12 as sensitive.

Cultural/Historic: The river segment is rich in cultural resources. From the prehistoric component, the most notable are the large and significant sites of the Sinagua phase of the Anasazi Culture. The riparian environment of the Verde also supported the hunting and gathering of other cultures, both contemporary with and earlier than the Sinagua.

The historic component is also rich and varied and includes homesteads, mining operations, a railroad, and possibly one of the Forest's earliest Ranger Stations.

Classification:

Recreational

The total river corridor includes 11,338 acres, of which approximately 90 per cent is administered by the Forest Service.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The river, where it enters the Forest Boundary on the west to Perkinsville, travels through basaltic lava flows, limestone and sandstone deposits. From Perkinsville to the Packard Ranch, deposits bordering the river are primarily made up of sandstone and limestone and become significantly higher. Geologic features such as caves, arches, and steep cliffs are common. From the Packard Ranch to the end of the study area, limestone and sandstone deposits are capped with basalt.

Although the geology of the river contributes significantly to the outstanding scenery of the Verde River and presents an interesting geologic display, it is not considered "outstandingly remarkable". The geologic characteristics are quite common to the area and do not display unique or unusual geologic features or provide evidence of geologic processes which are unique or unusual in character.

Streamflow and Water Quality

Streamflow: Perennial

The U.S. Geological Survey maintains two gauging stations within the study segment. The maximum, minimum, and average discharges are as follow:

<u>Station</u>	<u>Maximum</u>	<u>Minimum</u>	<u>Average</u>
Paulden	19,000 cfs	14 cfs	42 cfs
Clarkdale	63,000 cfs	64 cfs	192 cfs

Water Quality: Water quality is high. Water quality samples collected indicate that the state water quality standards were met for recreation, wildlife, fisheries, and agricultural uses described by the Arizona Department of Environmental Quality.

The river, as it meanders through rugged terrain, creates a deciduous riparian forest dominated by hardwoods and shrubs. The principle species are cottonwood, willow, ash, Arizona oak, hackberry, seepwillow, burrobrush, baccharis, desert willow, mesquite, salt cedar, and occasional Arizona sycamore. The herbaceous ground cover is primarily annual grasses and forbs with a high percentage of bermuda grass.

Vegetation beyond the river's influence consists of catclaw, shrub oak, prickly pear, and creosote bush, with pinyon and juniper often intermixed. Dominant grasses include sand dropseed, three-awn species, galleta, blue grass, and sideoats.

Threatened and or endangered species, Category 1 includes, *Erigeron lobatus*, *Perityle saxicola*, *Agave arizonica*, *Agave toumeyana* var. *belia*, *Eriogonum capillare* and *Cercifuga arizonalca*. Category 2 includes, *Graptopetalum rusbyi*, *Eriogonum ripelyi*, and *Cheilanthes pringlei*.

Fisheries and Wildlife - The riparian community and the river itself provide niches for over 60 percent of the vertebrates that inhabit the forest. Of the 383 vertebrates known to exist on the Prescott National Forest, 255 can be found along the river and its immediate environs. The river provides valuable winter habitat for waterfowl since the low elevation promotes ice-free conditions.

The primary game species inhabiting the area, but not dependent on the riparian habitat, are mule deer, white-tail deer, javelina, morning dove, quail, cottontail rabbits, mountain lion and black bear.

Water quality within the study segment is high. Water samples taken indicate that dissolved oxygen was at or close to saturation and water temperatures were well within the range to sustain a warm water fisheries. Dissolved solids, a good indicator of pollution, was well within the range necessary for supporting a good mixed fish population.

There are 14 species of fish which are considered as game fish. The most popular of these are catfish, large and small mouth bass, blue gill, sunfish, suckers and carp. Threatened, endangered and sensitive fish species are: Roundtail chub (S), Spinedace (T) and Razorback sucker (E).

The entire Verde River and one-quarter mile on both sides has been identified as essential habitat for bald eagles. The bald eagle is listed as an endangered species on both the State and Federal lists. Bald eagles nesting north of Arizona use the river for wintering, and a local population of bald eagles use it for nesting and rearing young during the spring and summer.

Other threatened, endangered and sensitive species are: Black hawk (S), Yellow-billed cuckoo (S), American peregrine falcon (E), Southwest flycatcher (S), Osprey (S), Belted kingfisher (S), Mexican garter snake (S), Lowland leopard frog (S), Narrow-headed garter snake (S), River otter (S), Red bat (S) and the Least bittern (S).

The riparian community and high water quality provides for a remarkable diversity and abundance of fish and wildlife species. The study segment contains over 60 percent of the 383 vertebrates known to inhabit the Prescott National Forest, including 16 threatened, endangered or sensitive species, and it is this diversity of fish and wildlife species that make fish/wildlife an outstandingly remarkable value.

Visual Resources - The scenic value of the terrain is highly varied and distinctive. It includes vistas with sharp peaks and/or sharply serrated ridges or isolated peaks with distinctive gorges with vertical or near vertical canyon walls with unusual configuration or color.

Cultural and Historical Resources - The river has long been known for its wealth of pre-historic and historic sites and played an important role in the development of Arizona. Six major divisions of this history can be made.

Paleo-Indian Period (12,000 B.C. to 8,000 B.C.) - People of this era were primarily hunters who followed the movements of big game herds. Although no remains of this period have been verified, sites may be buried beneath alluvial and colluvial deposits.

Archaic Period (8,000 B.C. to A.D. 1) - As the climate changed, the game herds died out, and people became more knowledgeable of other food resources. More emphasis was placed on the gathering of wild plant foods. Possible camp sites of this period are known and consist primarily of isolated projectile points and scatters of flaked stone.

Agriculturalists (A.D. 1 to 1425) - Most prehistoric sites in the area date to this period. These valley inhabitants were known as the Southern Sinagua. Although probably developing from the earlier Archaic tradition, their culture was influenced by nearby groups. Earliest sites are pit house villages in the uplands, suggesting a hunting and gathering food base supplemented by farming areas along the Mogollon Rim. Later, pueblos in the open as well as cliff dwellings came into use.

Historic Hunters and Gatherers (A.D. 1425 to 1865) - When the first Spanish explorers entered the area in 1583, they found it occupied by the Northeastern Yavapai Indians. The Yavapai lifestyle was similar to that of the Archaic Period, being dependent upon a seasonal cycle of hunting and wild plant food harvesting. Some irrigation farming was also practiced.

The Pioneer Settlers (1865-1875) - Farmers first entered the area from Prescott in 1865. Hostilities with the Yavapai Indians developed as increasing numbers of settlers moved into the area, disrupting the traditional Yavapai lifestyle by restricting access to food collecting areas.

Miners and Railroads (1875 to Present) - In 1876, copper mines near Jerome that had been used in prehistoric times were rediscovered. In 1886, the Atlantic and Pacific Railroad was completed into Prescott. In 1911 the Verde Valley Railroad was constructed along the Verde River from Clarkdale to connect with the Ash Fork - Prescott Railroad lines located at Drake. Today this railroad is known as the Arizona Central Railroad and has a dual purpose of transporting freight between Clarkdale and Drake and providing a scenic railroad trip for tourists between Clarkdale and Perkinsville.

Only limited surveys have been conducted along the Verde River, however, information gained from the recorded sites shows the area to contain "outstandingly remarkable" cultural and historic values. Many of the sites are considered to be geographically significant and also represent an important era in the development of the Southwest.

Air Quality - The air quality over the Verde River is good. The largest single pollutant in the general area is dust which is largely the result of vehicular travel along the low standard dirt roads.

LAND USES AND DEVELOPMENTS

Land Ownership - The river study segment is located in the Prescott National Forest.

River Corridor Acreage: There are 10,138.21 acres of National Forest Land and 1,200.49 acres of private land within the study segment. There are 7 parcels of private land scattered along the entire length of the study segment. The parcels are located as follows:

Juniper Ranch - T17N, R1W, Sections 3&4 (158.59 acres); Inscription Canyon Ranch - T17N, R1W, Sections 4, 5 & 8 (323.01 acres); Verde Ranch - T18N, R1W, Section 35 (60 acres); Perkinsville Ranch - T18N, R2E, Section 31 (517.08 acres); Alvarez Ranch - T17N, R2E, Section 12 (60.56 acres); Gold Tooth - T17N, R3E, Section 7 (21.88 acres); Packard Ranch - T17N, R3E, Section 7&8 (59.37 acres).

Water Rights and Water Resource Developments - Water downstream is used largely by the Phoenix metropolitan area.

There are three water diversions along the study segment, the uppermost of these diversions lies in Section 31, T18N, R2E (Perkinsville private lands). The structure consists of a windrow of rock and earth extending into the stream channel, forcing water into the irrigation system by gravity flow. The second diversion is similar in construction to the first and is located in Section 12, T17N, R2E (Alvarez private lands). It provides water for agricultural purposes. The third diversion is located in Section 33, T17N, R3E, just inside the study segment. The water, which is used for irrigation is diverted out of the river into a ditch which leads to private lands. The diversions have a negligible effect on the freeflowing character of the river.

The water rights on the Verde River are in the process of adjudication. Until adjudication is complete, no positive statement can be made about water rights.

Transportation Facilities - The study segment is not accessible by paved Federal, State, or County highways. However, US Highway 89 and 89A provides access to county and Forest developed roads that serve the river. There are five low standard dirt access roads in this segment. They are Morgan Ranch Road (FS-638), Bear Siding Road (FS-492A), Verde Ranch Road (FS-635), Perkinsville Road (FS-354), and the Packard private lands access road (FS-131). The Verde Ranch Road and Perkinsville Road can be driven by passenger cars. The other three roads usually require a high clearance vehicle. A steel bridge is located at Perkinsville where Forest Road 354 spans the river. Trail access to the river for hikers and horseback riders is usually on unconstructed cross-country routes, however there are five Forest System trails that provide access from the canyon rim to the river.

The Arizona Central Railroad enters the study segment two miles west of Perkinsville. It spans a steel bridge on the east side of Perkinsville private land and remains within the study segment for 20 miles until it climbs out of the river bottom, between the Packard private lands and Clarkdale. The train transports both freight and passengers. Freight is transported between Clarkdale and Drake. The Arizona Central Railroad features a scenic train ride between Clarkdale and Perkinsville and in 1992 approximately 50,000 people enjoyed this excursion.

Recreation Activities - Since access to most of the Verde River within the study segment is limited, recreation use is lower than on some other rivers in Arizona. The absence of developed recreation sites, coupled with limited road and trail access, concentrates most recreation use around areas served by the roads or trails such as at Bear Siding and Perkinsville. This concentrated use can sometimes create conflicts between the recreation users and private landowners. Alluvial flats adjacent to the river provide areas near water where recreationists can find sufficient shade and firewood that is necessary for an enjoyable camping or picnicking experience. Two areas where public use is concentrated are at Bear Siding and Perkinsville.

There are several locations within the study area that have good fishing potential. Catfish is the most sought after species but other fish, such as largemouth and smallmouth bass, bluegill, and sunfish are also harvested. Local residents account for most of the fishing use. In general, hunting does not occur in the study area as frequently as in the more accessible surrounding area. Upland birds and ducks are the most popular game animals.

This river segment has limited potential for extended float trips. The average flow rate is less than 200 cfs and limits floating to kayaks, innertubes, or small rafts. Occasionally, when flow rates are higher, float trips can be made with canoes and larger rafts.

Arizona Central Railroad began providing scenic train rides between Clarkdale and Perkinsville around 1989. This activity has increased in popularity and today, more than 50,000 people ride the train annually, to view scenery and wildlife.

Current Special Management Designations - Critical habitat: Razorback Sucker

Mining - Federal lands located in the east 1/2 of T17N, R2E and the west 1/2 of T17N, R3E (Between Mormon Pocket and Clarkdale) have been withdrawn from mineral entry by Reclamation Withdrawal for water power development purposes. The withdrawal contains a total of 14,972 acres and is located within 3 miles and on both sides of the river.

There are no known mineral production sites within the river section between Mormon Pocket and the West Prescott National Forest boundary, which is open to mineral entry. BLM records indicate there are no mining claims present within the river study segment.

Prospecting has shown a very limited amount of base metals within or adjacent to the study segment. Numerous non-metallic discoveries have been made within three miles of the river, however, only one quarry is located inside the study area and it is presently inactive.

The area from Clarkdale to Bear Siding forms a portion of the southern boundary of lands determined as prospectively valuable for oil and gas. The rest of the area is not considered valuable for oil and gas.

Special Land Uses

Facilities under Forest Service special use permits or easements:

- (1) gas line crossing
- (20) miles of railroad
- (4) power transmission lines
- (3) water diversions (agricultural or domestic)
- (1) storage yard
- (2) special use pastures

Livestock Grazing and Agriculture - Since the introduction of grazing, the Verde River has served as a primary watering and foraging source. As a result, the River and the adjacent bench lands have been areas of livestock concentration. This use, coupled with the physical nature of the river corridor, has somewhat changed the ecology of the area. Parts of 7 range allotments occur within the study area. Range improvements consist of allotment boundary and pasture division fences, corrals, and 17 water gaps located on both Forest and private lands.

Timber Harvest - There is no ASQ and none of the corridor is identified as suitable for timber harvest.

SOCIAL AND ECONOMIC VALUES

The local users of the river are from the communities of Chino Valley, Paulden, Prescott, Jerome, Clarkdale, Williams, Ash Fork and Cottonwood. Other users include individuals from Phoenix and Flagstaff.

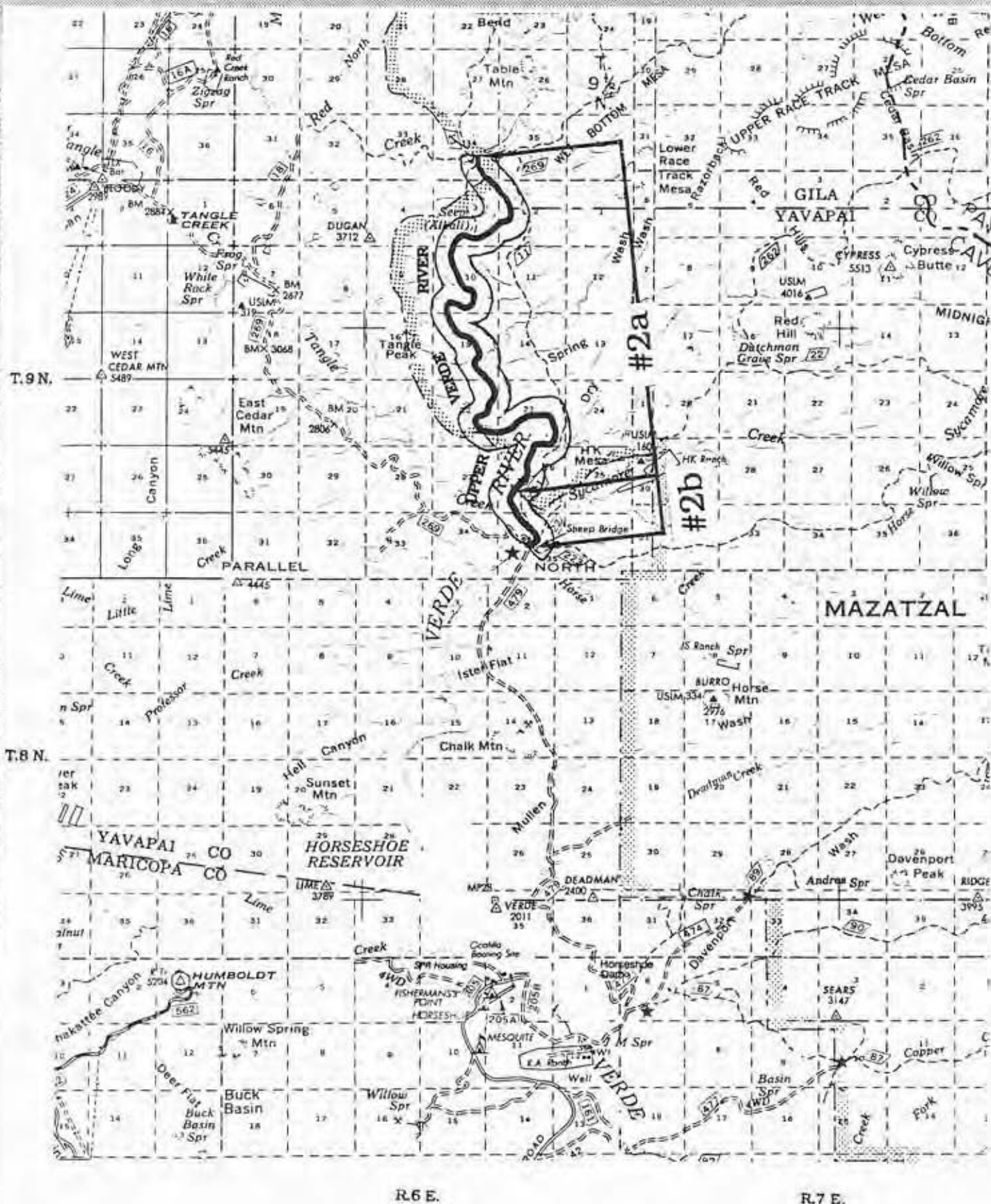
REFERENCES

Verde River Wild and Scenic River Study Report and Environmental Impact Statement, September 1982 --- USDA Forest Service

Arizona Rivers Assessment Data Report. -- Arizona Game & Fish Department

UPPER VERDE RIVER #2

UPPER VERDE RIVER #2



0 1 2 3 4
MILES



UPPER VERDE RIVER #2
Segments 2-a/2-b

LOCATION

Located in Yavapai County (Congressional District 3) and Gila County (Congressional District 6) within the Tonto National Forest, the Upper Verde River #2 is located between Interstate Highway 17 and State Highway 87, north of Phoenix and north of Horseshoe Reservoir. The Verde River is a major desert river with significant riparian habitat and excellent river-running opportunities. The Arizona Wilderness Act of 1984 designated a portion of the Verde River as Wild and Scenic River Area. The Wild River Area ends at Red Creek, and this potential River Area would extend the Wild River Area an additional 9.8 miles downriver.

Total River Length: 195 miles (Sullivan Lake to the confluence with the Salt River)

<u>Segment 2-a</u>	8.8 miles	Starts at the mouth of Red Creek and extends to the southern boundary of the Mazatzal Wilderness.
<u>Segment 2-b</u>	1.1 miles	Starts at the southern boundary of the Mazatzal Wilderness and extends to Sheep Bridge.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segments Found Potentially Eligible for Designation:

Approximately 9.9 miles of stream are evaluated for this resource report.
Total acres in potential River Area (both segments): 3,130 acres
Percent administered by Forest Service: 100 %

Segment 2-a

Township	9 1/2 N	Range	6 E	Sections	34, 35
	9 N		6 E		2, 3, 9, 10, 11, 14, 15
					16, 22, 23, 24, 25, 26, 27

Segment 2-b

9	N	6 E	26, 27, 34, 35
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Segment 2-a and part of Segment 2-b were considered during the study that led to the 1984 designation of the Verde Wild and Scenic River Areas. It was dropped from consideration due to the probability of becoming part of the water impoundment for a proposed flood control project; this proposal was dropped in 1985. The impacts of designation of this section were not presented to the public in the 1982 Environmental Impact Statement (EIS), however during the early analysis and evaluation process, it was determined that this river section did meet both the eligibility and classification criteria of the Wild and Scenic Rivers Act of 1968.

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Recreational
Riparian
Ecological

D. Classification: Wild

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The Upper Verde River is located in the Basin and Range Province of Arizona, and the area is characterized by isolated mountain ranges separated by alluvial valleys and basins. The river has incised through Proterozoic Payson Granites, Tertiary volcanics and sedimentary deposits and terrace deposits of Quaternary age. The area is noted for exposures of the Verde Red Granite batholith, one of the largest plutonic bodies in Central Arizona, occupying approximately 12,000 km² of the lower Verde River drainage.

B. Streamflow and Water Quality: Streamflow is perennial. Median flow is 238 cfs.

Water quality data from Arizona Department of Environmental Quality, U.S. Geological Survey, and Salt River Project indicates that Arizona water quality standards are generally met. Occasional violations of turbidity and mercury have occurred.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that the potential River Area fully supports its designated uses. Applicable water quality standards include: warm water Aquatic and Wildlife, Full Body Contact, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: The Upper Verde River riparian area has been frequently scoured by major floods during the last decade. Consequently, forested riparian communities occur as clumps and at the confluence of the Verde River with major tributaries. Small Cottonwood-Willow Communities can be found at confluences with Wet Bottom Creek, Spring Wash, and Sycamore Creek. This community was described by Brown (1982) as the Fremont Cottonwood-Goedding Willow Association. Dominant trees include Fremont cottonwood and Goedding willow.

The predominant Verde River riparian community is sparse shrub-scrub on cobble point bars. This is an early seral community which is frequently scoured. Dominant species include burrobrush, seepwillow, and desert broom. Seedlings of cottonwood and willow are also seasonally abundant.

Clumps of common reed grass frequently occur along the channel edge. This community was described by Brown (1982) as the Phragmites communis Association. Several river terraces support small stands of mesquite bosque. Common species include mesquite, red brome, lotebush, and hackberry.

The variety of riparian-dependent plant and animal species found on the Verde River have identified it as having outstandingly remarkable riparian and ecological values. Though most riparian areas on the Verde are early seral, many are improving in response to improved grazing management. The presence of this array of riparian community types along a medium-to-large, perennial, free-flowing river system within the Sonoran Desert makes this a remarkable riparian resource.

D. Fish and Wildlife:

Fisheries: The Upper Verde River, one of the few, free-flowing "big" rivers in the State of Arizona, is truly crucial to the recovery of several Endangered, Threatened, and Forest Service Sensitive fish. Historically, there were hundreds of miles of interconnected, free-flowing, large rivers in Arizona. These rivers supported large populations of native fish, including razorback sucker, Colorado squawfish, roundtail chub, bonytail chub, loach minnow, spikedace, and woundfin. The majority of these fish are referred to as "big river fish" because they were generally found in large rivers. It appears that they also used lower sections of some tributaries to these large rivers. All of the above fish are now Endangered, Threatened, or Forest Service Sensitive. Water diversions, dams, and the lowering of water tables have resulted in the destruction or severe modification of the majority of their historic habitat.

Approximately 30% of the Verde River has been modified; the remaining, unmodified 70% is within the eligible Segments 2-a and 2-b. These segments are so important to the recovery of Arizona's native fish that the U.S. Fish and Wildlife Service has recently proposed that the Upper Verde River is designated as Critical Habitat for the Endangered razorback sucker.

Wildlife: Wildlife species either known to occur in this reach, or which may occur, include 16 mammal species, 46 reptile species, 3 amphibian species, and 63 bird species. The potential Wild River Area provides valuable winter habitat for migratory waterfowl and birds, including important foraging habitat for endangered bald eagles. In addition, the U.S. Fish and Wildlife Service is currently considering a portion of the Verde River (which includes the potential Wild River Area) as critical habitat for the southwestern willow flycatcher.

Special species known to occur within the potential River Area may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Occult little brown bat	- Candidate
Loggerhead shrike	- Candidate
Southwestern cave myotis	- Candidate
Mexican garter snake	- Endangered
Parker's riffle beetle	- Candidate
Arizona southwestern toad	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Western red bat	- Candidate
Belted kingfisher	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species: Harris' hawk, ringtail, costi, and the southwestern cave myotis.

Suitable habitat is available in this reach for special interest species including river otter, Gilberts skink, desert tortoise, Gila monster, zone-tailed hawk, osprey, Mississippi kite, narrow-headed garter snake, black-crowned night heron, and Arizona mountain kingsnake.

Game species known to occur within the potential Wild River Area include deer, bear, mountain lion, doves, rabbits, and collared peccary.

The outstandingly remarkable ecological values of this potential River Area are due to the rarity of the riparian environment in the desert southwest and its importance to the continued existence of wildlife, especially the numerous endangered, threatened, sensitive, and special interest species already mentioned.

E. Visual Resources:

Segment 2-a

Visual Quality Objective: Preservation (except the non-Wilderness portion of Red Creek, which is Retention)

Character Type: Tonto

Character Subtype: Sonoran Arizona Uplands

Segment 2-b

Visual Quality Objective: Retention (non-Wilderness)

Character Type: Tonto

Character Subtype: Sonoran Arizona Uplands

Variety Class: A-Distinctive

This portion of one of the Southwest's major rivers is located in the Sonoran Desert against the backdrop of the Mazatzal Mountains. The potential Wild River Area is characterized by varied landforms including cliffs, mesas, gently rolling hills, and six confluence areas. Distinctive riparian vegetation is found in association with side-streams and benches. Further away from the river, the vegetation is a moderately varied mixture of palo verde-cati to interior chaparral, changing with the downstream drop in elevation. This free-flowing river segment provides an oasis-type atmosphere in an arid desert setting.

P. Cultural and Historical: There are 28 known sites within the potential River Area (none on the National Register). The available data suggests an extensive prehistoric occupation by the Hohokam people; evidence ranges from sherd and lithic scatters, to large villages with pithouses and/or pueblo architecture that dates from around AD 800 to 1400. Spaniards first touched the Verde River in 1583, looking for gold. The area was used by the Yavapai Indians beginning about AD 1700 until the establishment of reservations. In the late 1820s, Anglo fur trappers explored the Verde from its confluence with the Salt River upstream to the headwaters in Chino Valley. Cattle and sheep grazing exploded around 1900, leading to the need for a safe livestock crossing over the Verde River. The Verde River Sheep Bridge (AR-03-12-01-03) was originally constructed for flocks of sheep to cross the river, and was used for this purpose from 1943 until 1979. Cattle ranching replaced the sheep, with grazing allotments remaining active in the potential Wild River Area.

LAND USES AND DEVELOPMENTS

A. Land: Upper Verde River #2 potential Wild River Area is approximately 9.9 miles in length, and contains approximately 3,130 acres. There are no parcels of private land within it.

The entire potential River Area is within withdrawn areas:

Segment 2-a

Arizona Water Power Designation #5

Mazatzal Wilderness

Bureau of Reclamation - withdrawn from Public Land Laws and Mineral Entry

Segment 2-b

Arizona Water Power Designation #5

B. Water Rights and Water Resource Developments: The Forest Service applied for an instream-flow water right in 1985 for a reach of the Verde River that includes the potential Wild River Area. The application asks for a minimum year-round flow of 25 cfs at Beasley Plate (approximately 40 miles upstream of the upper potential river segments), and 100 cfs at a U.S. Geologic Survey gauge less than a mile downstream from the potential Wild River Area.

No diversions/dams exist on National Forest lands within the potential Wild River Area. Diversions for irrigation of approximately 12,500 acres of private lands occur some miles upstream. These diversions do not physically affect the free-flowing character of the study segments, but may have an effect on the water level in these segments during low-flow periods. Communities upstream of the study segments (eg. Clarkdale, Cottonwood, and Camp Verde) have been tentatively granted a share of the Colorado River water available from the Central Arizona Project (CAP). These communities may be permitted to exchange their CAP allocation for Verde River water, which would result in additional diversions above the potential Wild River Area. It has not yet been determined if any of these water exchanges will occur.

Depending on how Horseshoe Dam is operating in a major flood, water from Horseshoe Reservoir could back up into Segment 2-b of the potential River Area, but would not go as far as Segment 2-a.

C. Transportation Facilities:

Segment 2-a

Road access is provided to the northern end of the potential Wild River Area via Forest Development Road #18 (Red Creek Road), a very rough four-wheel-drive road that ends at the Mazatzal Wilderness boundary, near the confluence of Red Creek and the Verde River. The road has been adopted by a four-wheel drive club which performs periodic maintenance and organizes occasional trips.

Segment 2-b

On the southern end of the potential Wild River Area, Forest Development Road #269 (Bloody Basin Road) and Forest Development Road #479 (maintained gravel roads) provide access to the historic Verde Sheep Bridge (pedestrian and livestock use only) from either side of the river. Forest Development Road #479 can only be reached by crossing Horseshoe Dam (not available for public access), or by fording the Verde River below the Dam (during low flows only). The Sheep Bridge provides access to trails leading into the Mazatzal Wilderness. The Verde River Trail #11 parallels the Verde River, but is mostly outside the potential River Area.

D. Recreation Activities and Facilities:

Segment 2-a

This potential Wild River Area is almost entirely within the Mazatzal Wilderness. Dispersed recreation activities can occur year-round and include hiking, backpacking, camping, horseback riding, hunting, fishing, non-motorized river-running, and off-highway travel (Red Creek Road #18). River-running is most popular during runoff in March or April.

Outfitter/guide services provided include: river-running (one), fishing (one), hunting (several), livestock (two), college courses (one), youth rehabilitation (one).

An estimated 500 recreation visitor days (RVD's) occur within the potential Wild River Area.

Segment 2-b

The Verde River Sheep Bridge is located just below the southern end of the potential Wild River Area. A hot spring is located immediately north of Sheep Bridge on river right, but is not developed. Dispersed recreation activities can occur year-round and include hiking, backpacking, camping, horseback riding, hunting, fishing, non-motorized river-running, and viewing cultural/historical sites.

Outfitter/guide services provided include: river-running (same one), fishing (same one), livestock (same two), college courses (same one), and off-highway tours (one).

An estimated 4,000 recreation visitor days (RVD's) occur within the potential Wild River Area.

The Upper Verde River #2 has been identified as having outstandingly remarkable recreational values. The potential Wild River Area is within and adjacent to the Mazatzal Wilderness and would be an addition to the previously designated Verde Wild River Area (1984). There is challenging white-water, spectacular scenery, Wilderness challenge and risk, outstanding opportunities for solitude, and cultural/historical interest.

E. Special Management Designations: Mazatzal Wilderness - 90% of the potential Wild River Area (approximately 2,700 acres) is within the Mazatzal Wilderness. The Wilderness contains 250,517 acres of the Tonto and Coconino National Forests. Established in 1938, the area consists of rough desert mountains, sometimes broken by narrow, vertical-walled canyons. Elevations range from 2,100 feet along the Verde River to 7,903 feet on Mazatzal Peak.

F. Mining: The entire potential Wild River Area is withdrawn from mineral entry.

There are no existing claims which have been identified (Bureau of Land Management, May 10, 1993) as contained within the sections associated in the potential Wild River Area.

There are no oil or gas leases within the potential Wild River Area. Both Segment 2-a and 2-b are located within a zone identified as exhibiting low probability for economic petroleum reserves. Although a hot spring is located at the southern boundary of Segment 2-b, geochemical evidence does not substantiate a geothermal resource. All of Segment 2-a and portions of the western boundary of Segment 2-b extend through areas of few or no known mineral deposits, but geological terrane is indicative of conditions favorable for the occurrence of gold and silver. In addition, concentrations of molybdenum occur within both segments, but exhibit low mineral resource potential.

G. Special Uses: Special Use Permits issued are associated with outfitter/guide services.

H. Livestock Grazing and Agriculture: No agriculture occurs within the potential Wild River Area. Segment 2-a and 2-b have two grazing allotments established within them, with approximately 2.5 miles of fence and watergap improvements.

Red Creek Allotment has 7,415 authorized animal unit months (AUM's). Approximately 3% of the allotment is within the potential Wild River Area, which would equate to 222 AUM's of grazing annually.

Sears Club/Chalk Mountain Allotment has 10,345 authorized AUM's. Approximately 0.3% of the allotment is within the potential River Area, which would equate to 31 AUM's of grazing annually.

I. Timber: The potential Wild River Area is located mostly within the Mazatzal Wilderness where timber harvesting is restricted, and where no timber exists. Outside of the Wilderness only dead and down fuelwood gathering is allowed.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities for the challenges of white-water boating as well as solitude, viewing of scenery and wildlife in an area with preserved unique, natural conditions. The two livestock permittees derive social benefits from a way of life associated with the resources contained upon the National Forest System lands.

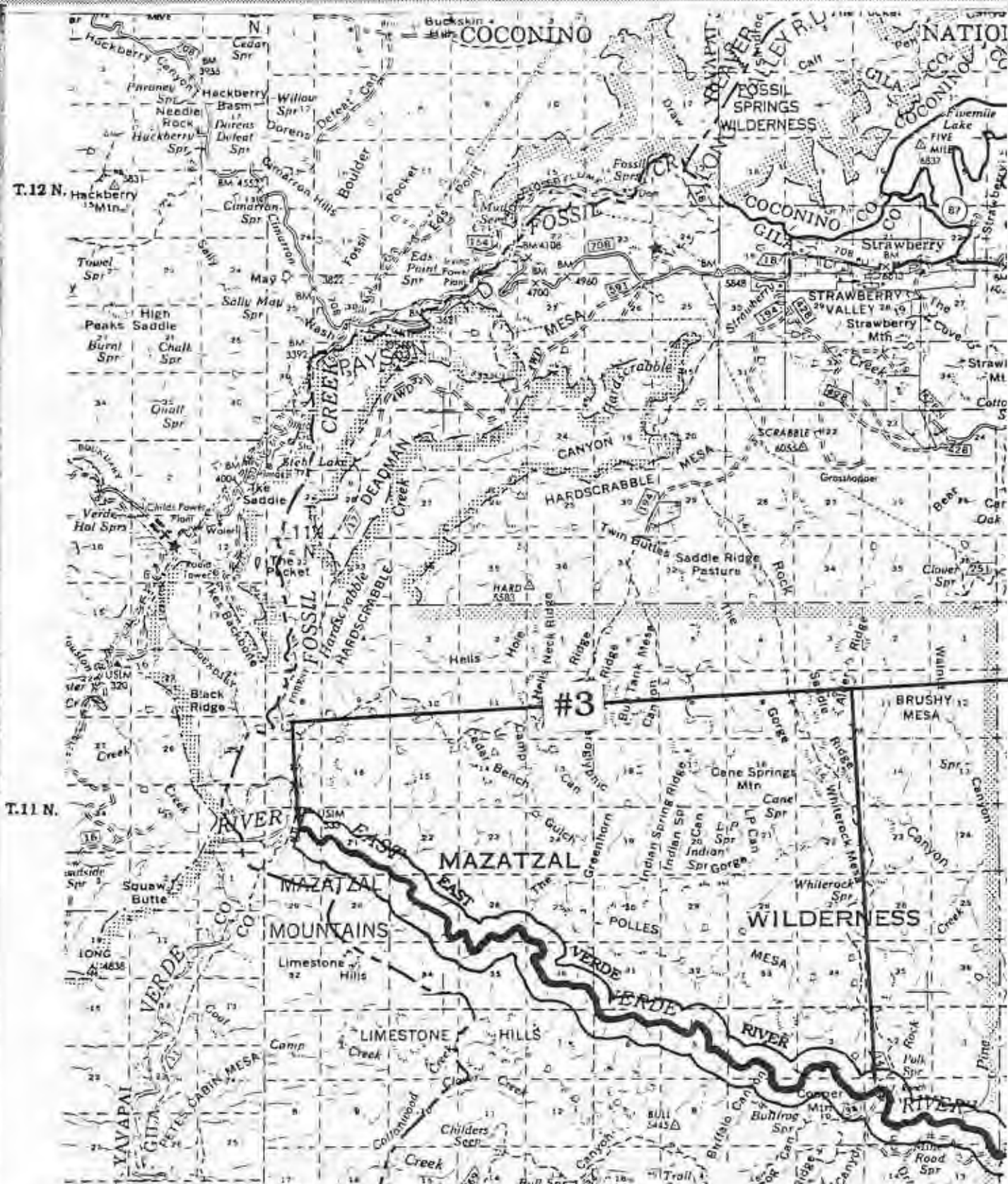
Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$18.89 per recreation visitor day for Segment 2-a, and a dollar value of \$11.45 per recreation visitor day for Segment 2-b. An estimated visitation of 500 recreation visitor days occurred within the potential Wild River Area for Segment 2-a, and 4,000 recreation visitor days occurred for Segment 2-b, resulting in a total economic value of \$55,245.00 per annum.

Outfitters 1992 earnings resulted in a revenue to the U.S. Government of less than \$5,000.00. Only a small part of those earnings can be attributed to activities in the potential Wild River Area.

Allotment fees are \$1.86 per animal unit month for a total of 253 animal unit months occurring on the allotments within the potential River Area, resulting in \$470.00 per annum in fees being collected by the government. There is no indication that valuable minerals are, or have been, mined and marketed from the potential River Area. There is no timber suitable for harvest within the potential River Area, and no timber has been sold.

EAST VERDE RIVER

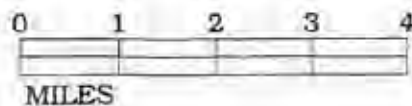
EAST VERDE RIVER



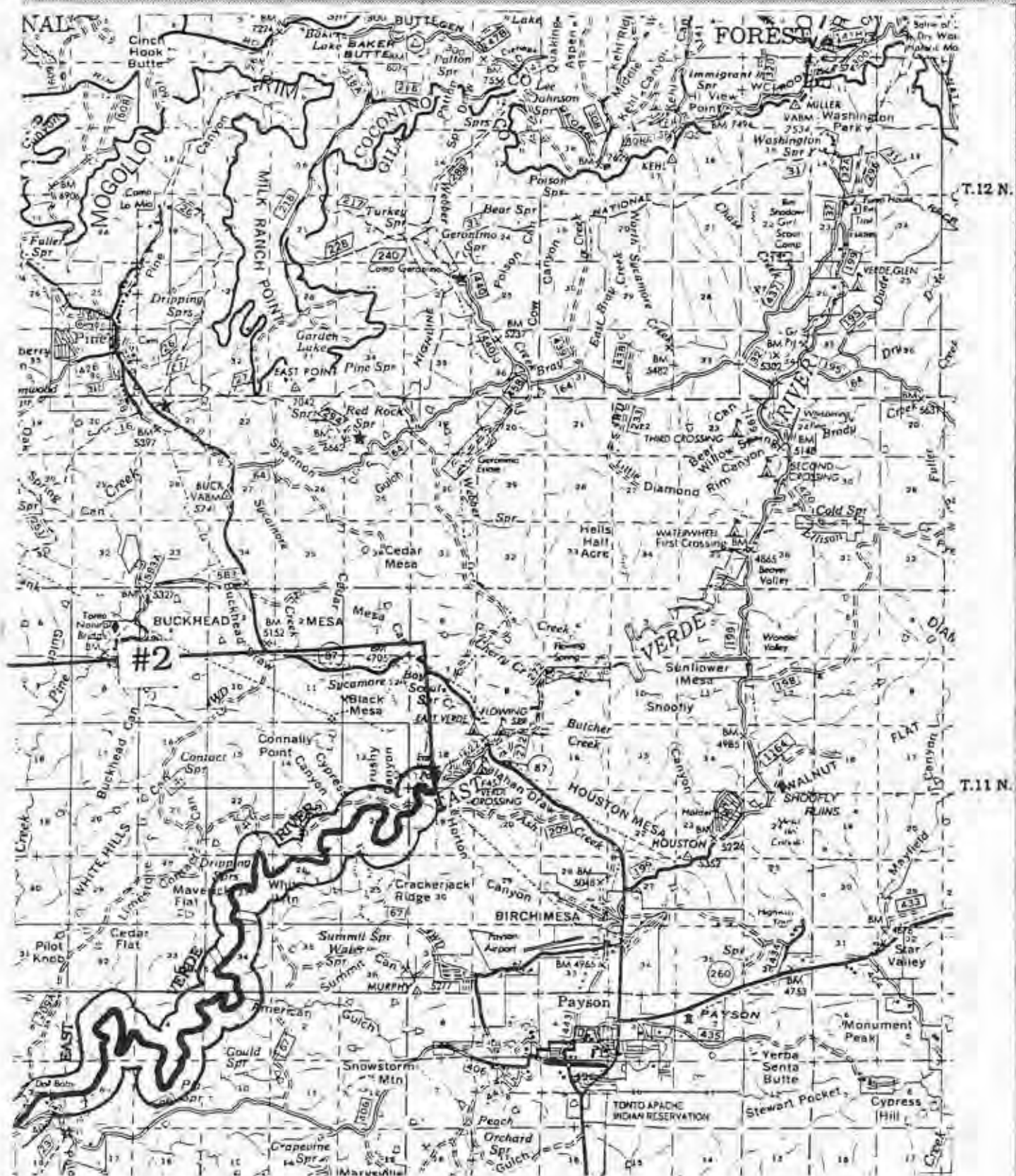
R.6 E.

R.7 E.

R.8 E.



EAST VERDE RIVER



R.9 E.

R.10 E.

EAST VERDE RIVER - SEGMENT #2

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, the East Verde River's headwaters start in a Ponderosa pine/mixed conifer forest at the Mogollon Rim approximately 15 miles north of Payson, Arizona. Flowing south, the river travels through chaparral woodlands and makes a final descent into the Sonoran Desert where it joins the Verde River. Easy access and high recreational use occur where Arizona Highway 87 crosses the river, between the towns of Payson and Pine; the river becomes more remote as it flows west into the Mazatzal Wilderness.

Total River Length: 41.9 miles

- Segment 1 - 8.9 miles Found not potentially eligible
Segment 2 - 20.0 miles Begins approximately 9 miles below the headwaters at the west boundary of the "East Verde Park Estates" and continues to the west boundary of the L.F. Ranch.
Segment 3 - 12.7 miles Begins at the west boundary of the L.F. Ranch and continues to the Verde Wild River Area boundary.
Segment 4 - 0.25 miles From the Wild River Area boundary to the confluence with the Verde River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

For complete resource information on East Verde River Segment #3, reference that report.

A. Segment Found Potentially Eligible for Designation:

Approximately 20.0 miles of stream are evaluated for this resource report.
Total acres in Segment #2 potential River Area: 5,300 acres
Percent administered by Forest Service: 96 %

Township	10 N Range	8 E Sections	11, 12, 13
	10 N	9 E	3, 4, 5, 7, 8, 9, 10, 18
	11 N	9 E	13, 22, 23, 24, 25, 26, 27, 33, 34
	11 N	10 E	18, 19

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Wildlife
Riparian

D. Classification:

Recreational

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The East Verde River is located in the Transition Zone between the Colorado Plateau and Basin and Range Provinces of Arizona. The zone is characterized by mountainous terrain and narrow, shallow basins. The river area is underlain by igneous and sedimentary rocks of Proterozoic age, Paleozoic limestones and sandstones, volcanics and gravels of Tertiary age, and Quaternary alluvium and landslide formations. These units form prominent cliffs and steep slopes throughout the potential River Area. Portions of the River cut through the East Verde River Formation, one of the earliest mafic volcanic centers that evolved in the Mazatzal Mountains, here named for its type section along the East Verde River.

This segment lies within an area of few known mercury deposits, but geologic terrane is indicative of conditions favorable for its occurrence. Volcanic rocks found in the area of the East Verde River are favorable for massive sulfide-type mineral deposits similar to those found in Jerome, Arizona. No deposits of this type have been found in the area, but the geologic terrane suggests that massive sulfide bodies may exist in the East Verde River sequence.

B. Streamflow and Water Quality:

Streamflow is perennial. Median flow is 26 cfs.

Water quality data from Arizona Department of Environmental Quality and the U.S. Geological Survey indicates that Arizona water quality standards are generally met. Violations of standards for turbidity and arsenic have been recorded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates that this reach does not support its designated uses of: coldwater Aquatic and Wildlife, Full Body Contact, Domestic Water Source, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: The riparian vegetation in the upper portion of the potential River Area is a Sycamore-Ash Community, described by Brown (1982) as the Sycamore-Ash-Fremont Cottonwood-Mixed Deciduous Association. This is a fairly common riparian community on the Tonto National Forest.

Dominant tree species are sycamore, alder, ash, Gooding willow, and cottonwood. Tree canopy is moderately dense, averaging about 40%. Plant species diversity is high, including species of 9 trees, 11 shrubs, and 10 common herbaceous species. The high structural and species diversity contribute to high values for riparian-dependent resources, such as wildlife habitat and recreation. Riparian vegetation condition is good.

Segment #2 of the East Verde River has been identified as having outstandingly remarkable riparian value. Downstream, in the vicinity of Doil Baby Ranch, the riparian vegetation is a Cottonwood-Willow Community. This is the Fremont Cottonwood-Gooding Willow Association described by Brown (1982), which is the rarest riparian community type on the Tonto National Forest.

The Arizona agave (listed as an endangered species by the U.S. Fish and Wildlife Service); the Tonto Basin agave and the pringle fleabane (U.S. Fish and Wildlife Service candidate species); and the Sierra fleabane (a Forest Service sensitive species) are known to occur, or have suitable habitat to occur, within the potential River Area.

D. Fish and Wildlife:

Fisheries: The East Verde River Segment #2 has a variety of warmwater fish, four native species of fish, and a record of several rare fish including the razorback sucker and the Gila roundtail chub. Other species which occur within the reach include: longfin dace, Sonora sucker, green sunfish, smallmouth bass, rainbow trout, desert sucker, and brown trout.

The Gila roundtail chub is listed as a candidate species by the U.S. Fish and Wildlife Service and is considered a threatened species by the state of Arizona. The razorback sucker is listed as an endangered species by the U.S. Fish and Wildlife Service, and by the state of Arizona.

Wildlife: Game species known to occur within this segment include elk, deer, bear, doves, rabbits, quail, and collared peccary.

This segment has been identified as having an outstandingly remarkable wildlife value because it provides fair to excellent habitat for a variety of threatened and endangered species, both on a National level and from within the state of Arizona. Special wildlife species occurring along the East Verde River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Mexican garter snake	- Candidate
Arizona southwestern toad	- Candidate
Swainson hawk	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate
Narrow-headed garter snake	- Candidate
Loggerhead shrike	- Candidate

Arizona State Threatened and Endangered species:

Chiricahua leopard frog	- Threatened
Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species: Coati, ringtail, and the zone tailed hawk.

E. Visual Resources:

Visual Quality Objective: Partial Retention
Character Type: Tonto
Character Subtype: Upper Tonto
Variety Class: Partial Retention

The East Verde River flows through deep rounded bluff-sided canyons. The stream starts in a pine/juniper transitional zone, and ends in grass/chaparral. A number of old and large cottonwood trees combine with other riparian vegetation to give welcome shade to the sometimes broad stream bank.

F. Cultural and Historical:

There are no prehistoric or historical sites known to occur within the potential River Area.

LAND USES AND DEVELOPMENTS

A. Land:

Segment #2 is 20.0 miles in length and contains approximately 5,300 acres. It has four parcels of private land within it.

5,110 acres (96%) National Forest

200 acres (4%) private land:

149 acres in secs. 7, 8 & 18,	T. 10 N., R. 9 E., G&SRBM
21 acres in sec. 27,	T. 11 N., R. 9 E.
20 acres in sec. 34,	T. 11 N., R. 9 E.
10 acres in sec. 11,	T. 10 N., R. 8 E.

The only land withdrawal within this segment of the potential River Area is: Arizona Water Power Designation #6 (All acreage within the potential River Area is withdrawn under this designation.)

B. Water Rights and Water Resource Developments: The Forest Service applied for an instream flow water right in 1985 for a year-round flow of 4 cfs for a reach of the East Verde River that includes Segment #2 of the potential River Area.

One diversion exists on the National Forest near the Doll Baby Ranch. The diversion is typically constructed by bull-dozing a dike part way across the channel of the East Verde River and diverting up to one-half of the flow. The dike normally washes out and is rebuilt each year. This diversion has a small effect on the overall free-flowing character of this segment. The majority of the streamflow in Segment #2, during the low flow period in the summer and fall, is derived from a transbasin diversion out of Blue Ridge Reservoir that imports water from the Little Colorado River Basin to partially compensate for withdrawals from the Salt River Basin by Phelps Dodge Corporation for its mines near Morenci. Imports to the East Verde River occur approximately 13 miles upstream of Segment #2. Imports typically begin in April and continue through October. Median flow in the East Verde during the low-flow summer months ranges from 2 to 6 cfs without imported water; with the imported water, median flows range from 26 to 28 cfs. Although these imports do not physically affect the free-flowing character of this segment, they do substantially augment the volume of water flowing through it.

C. Transportation Facilities: Several Forest roads provide access to this popular dispersed recreation area. Forest Development Roads #209 and #209A have unimproved fords over the river. Forest Development Roads #406, #643A, #643B, and #502 all provide access points to the river. The last three miles of Road #406 is a permit road within the boundary of the Mazatzal Wilderness. It is closed to vehicular use by the general public, but provides access to the private land inholding. Forest Development Road #354 provides access to within 200 yards of the river. All the Forest roads to this river are unimproved dirt.

Approximately one mile of the Saddle Ridge Trail #14 is also within Segment #2.

D. Recreation Activities and Facilities: Doll Baby Trailhead (20 PAOT*) is the only developed recreation site within Segment #2 of the potential River Area. The City Creek Trailhead (20 PAOT*) is nearby. Dispersed recreation activities include hiking and backpacking, car-camping, picnicking, swimming, fishing, hunting, and off-highway driving. Approximately three miles of the river are within the Mazatzal Wilderness. Access is gained from State Highway 87 and numerous Forest roads and trails. An estimated 1,500 recreation visitor days (RVD's) occur within this segment of the potential River Area. Commercial activity consists of outfitter/guides for hunting, fishing, and hiking-related services on a Forest-wide basis.

* PAOT - Capacity of developed recreation sites, expressed as 'people at one time'.

E. Special Management Designations: Mazatzal Wilderness - approximately 960 acres of Segment #2 of the Potential River Area (18% of its total acreage) will extend into the Mazatzal Wilderness. This Wilderness embraces the north end of the Mazatzal Range and includes a total of 250,517 acres of the Tonto and Coconino National Forests. Established in 1938, the area consists of rough mountains broken with occurrences of narrow canyons. Elevations range from 2,100 feet along the Verde River to 7,903 feet on Mazatzal Peak.

F. Mining: All of that portion of this segment within the Mazatzal Wilderness (approximately 960 acres) is closed to mineral entry. All other acreage remains open to mineral entry.

There are approximately 40 existing claims which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within Segment #2, which is located within a zone identified as exhibiting low probability for economic petroleum reserves. Geochemical evidence does not substantiate geothermal resources in the region. Segment #2 extends through the Green Valley Mineral District which produced 93,000 pounds of copper, 1,400 ounces of gold, and 5,300 ounces of silver during the period of 1901 to 1958. The Gowen Mine is located within Segment #2 and produced moderate to high quantities of gold during 1881 to 1886 and moderate quantities of gold, silver, and copper after 1938.

G. Special Uses: Special Use Permits issued within Segment #2 are:

Arizona Public Service Company - 69 KV transmission line
Loren Pratt, et. al. - Road access to the L.F. Ranch
Various outfitter/guide-related services for hunting, fishing, and hiking.

H. Livestock Grazing and Agriculture:

No agriculture occurs within Segment #2, except on the private land. This segment has five grazing allotments established within it.

Payson/Cross V Allotment has 5,472 authorized animal unit months (AUM's). Approximately 1% of the allotment is within this segment, which would equate to 55 AUM's of grazing annually.

Pine Allotment has 2,028 (even year) and 2,448 (odd year) authorized AUM's. Approximately 1% of the allotment is within the potential River Area, which would equate to 2 AUM's of grazing annually. Improvements include a fence and two cattleguards on the Crackerjack Road. This allotment has a fenced lane to the river to be used only during drought conditions; it has not been used in the last ten years.

American Gulch Allotment has 1,466 + NI authorized AUM's. Approximately 8% of the allotment is within this segment, which would equate to 117 AUM's of grazing annually. The allotment has fence and watergap improvements at the boundary with Pole Hollow Allotment.

Pole Hollow Allotment has 2,100 authorized AUM's. Approximately 9% of the allotment is within this segment, which would equate to 189 AUM's of grazing annually. The allotment has fence and watergap improvements at the private land and Bull Springs boundaries.

Bull Springs Allotment has 1,920 authorized AUM's. Approximately 2% of the allotment is within this segment, which would equate to 58 AUM's of grazing annually. The allotment has watergap improvements, and contained within the boundary is private land with an internal pasture fence.

I. Timber: This segment is not suitable for timber harvest. No sales have been transacted nor are there any future sales planned. Under permit, this area is open for dead and down, personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow.

Recreational users derive social benefits from the opportunities for solitude, relaxation, viewing of scenery, and wildlife in an area with preserved unique, natural conditions, while the five livestock permittees and local land owners derive social benefits from a way of life associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a dollar value of \$11.45 per recreation visitor day. An estimated visitation of 1,500 recreation visitor days occurred within Segment #2 of the potential River Area, resulting in a total economic value of \$17,175.00 per annum.

Allotment fees are \$1.86 per animal unit month for a total of 421 animal unit months, occurring on the allotments within this segment of the potential River Area, resulting in \$783.06 per annum in fees being collected by the government. There is no indication that valuable minerals are being mined and marketed from this segment of the potential River Area. There is no suitable timber for harvest within the potential River Area.

EAST VERDE RIVER - SEGMENT #3

LOCATION

Located in Gila County (Congressional District 6), within the Tonto National Forest, the East Verde River headwaters start in a Ponderosa pine/mixed conifer forest at the Mogollon Rim, north of Payson, Arizona. The river flows south-west through chaparral woodlands and makes a final descent into the Sonoran Desert where it joins the Verde River. Easy access and high recreational use occurs where the river crosses State Highway 87 between the towns of Payson and Pine. The river becomes more remote as it flows west into the Mazatzal Wilderness.

Total River Length: 41.9 miles

Segment 1 - 9.0 miles Found not potentially eligible

Segment 2 - 20.0 miles From the west boundary of the "East Verde Park Estates" to the west boundary of the L.F. Ranch.

Segment 3 - 12.7 miles From the west boundary of the L.F. Ranch to the Verde Wild River Area boundary.

Segment 4 - 0.25 miles Already part of the Verde Wild River Area.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

(For complete resource information on East Verde River Segment #2, reference that report.)

A. Segment Found Potentially Eligible for Designation:

Approximately 12.7 miles of stream are evaluated for this resource report.

Total acres in potential River Area: 3,800 acres

Percent administered by Forest Service: 100 %

Township	10 N	Range	7 E	Sections	1
	10 N		8 E		3, 4, 5, 6, 8, 9, 10, 11
	11 N		7 E		20, 21, 22, 25, 26, 27, 28, 34,
					35, 36
	11 N		8 E		31, 32

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Wildlife
Riparian

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: The East Verde River is located in the Transition Zone between the Colorado Plateau and Basin and Range Provinces of Arizona. The zone is characterized by mountainous terrain and narrow, shallow basins. The river area is underlain by igneous and sedimentary rocks of Proterozoic age, Paleozoic limestones and sandstones, volcanics and gravels of Tertiary age, and Quaternary alluvium and landslide formations. These units form prominent cliffs and steep slopes throughout the potential River Area. Portions of the River cut through the East Verde River Formation, one of the earliest mafic volcanic centers that evolved in the Mazatzal Mountains, here named for its type section along the East Verde River.

B. Streamflow and Water Quality: Streamflow is perennial. Median flow is 29 cfs.

Water quality data from Arizona Department of Environmental Quality and the U.S. Geological Survey indicates that Arizona water quality standards are generally met. Violations of standards for turbidity and arsenic have been recorded.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. The 1992 Arizona Water Quality Assessment Report indicates this reach does not support its designated uses of: coldwater Aquatic and Wildlife, Full Body Contact, Domestic Water Source, Fish Consumption, Agricultural Irrigation, and Agricultural Livestock Watering.

C. Vegetation: Dominant tree species in the riparian zone are Fremont cottonwood, Goodding willow, and sycamore. Shrubs are not abundant. Herbaceous plants are abundant and dominant species include knotgrass, bermuda grass, cocklebur, and brown-eyed susan. Frequent floods have maintained this community in an early to mid-seral stage as indicated by the species composition and the young age classes of tree species. Livestock management practices have been good and the riparian vegetative trend is up.

About three miles below the L.F. Ranch, the cottonwood-willow community is reduced to small, scattered patches due to confining canyon walls and the resulting scouring. At the lower elevations there are scattered scrub-shrub riparian communities, dominated by burrobrush, seepwillow, desert broom, and mesquite.

The East Verde River Segment #3 has been identified as having outstandingly remarkable riparian values. The habitat within the potential River Area supports known threatened and endangered fish populations of razorback sucker and Gila roundtail chub. Additionally, known to occur, or the presence of suitable habitat to occur, are: The Arizona agave (listed as an endangered species by the U.S. Fish and Wildlife Service); the Tonto Basin agave and the pringle fleabane (U.S. Fish and Wildlife candidate species); and the Sierra fleabane (a Forest Service sensitive species).

D. Fish and Wildlife:

Fisheries: The East Verde River Segment #3 has records of several rare fish including the razorback sucker and the Gila roundtail chub. Other species which occur within the reach include: longfin dace, Sonora sucker, green sunfish, smallmouth bass, rainbow trout, desert sucker, and brown trout.

The Gila roundtail chub is listed as a candidate species by the U.S. Fish and Wildlife Service and as a threatened species by the state of Arizona. The razorback sucker is listed as an endangered species by the U.S. Fish and Wildlife Service and by the state of Arizona.

Wildlife: Game species known to occur within the potential River Area are deer, bear, doves, rabbits, quail, and collared peccary.

The East Verde River has been identified as having outstandingly remarkable wildlife values. The potential River Area provides fair to excellent habitat for a variety of threatened and endangered species, both on a national level and from within the state of Arizona. Wildlife species occurring along the East Verde River may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Bald eagle	- Endangered
Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Swainson hawk	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Mexican garter snake	- Candidate
Arizona southwestern toad	- Candidate
Narrow-headed garter snake	- Candidate

Arizona State Threatened and Endangered species:

Chiricahua leopard frog	- Threatened
Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species: Coati, ringtail, and the zone tailed hawk.

E. Visual Resources:

Visual Quality Objective:	Preservation
Character Type:	Tonto
Character Subtype:	Upper Tonto
Variety Class:	N/A for Wilderness

The East Verde River flows through deep rounded bluff sided canyons. The stream starts in a pine/juniper transitional zone, and ends in grass/chaparral. Many old and large cottonwood trees combine with the riparian vegetation to give welcome shade to the sometimes broad stream bank.

F. Cultural and Historical: There are no prehistoric or historical sites known to occur within the potential River Area.

LAND USES AND DEVELOPMENTS

A. Land: East Verde River Segment #3 potential River Area is 12.7 miles in length, containing approximately 3,800 acres, and has no parcels of private land.

Land withdrawals within the potential River Area are:

Bureau of Reclamation, Irrigation - Withdrawn from Public Land Laws and Mineral Entry
Arizona Water and Power Designation #6
Arizona Water and Power Designation #5
Mazatzal Wilderness - Withdrawn from Mineral Entry (entire segment)

B. Water Rights and Water Resource Developments: The Forest Service applied for an instream flow water right in 1985 for a year round flow of 4 cfs for a reach of the East Verde River that includes the potential River Area.

The U.S. Geological Survey operates a stream flow gauge near the bottom of the potential River Area, but has no effect on the free-flowing character of this segment. The majority of the streamflow in Segment #3, during the low flow period in the summer and fall, is derived from a transbasin diversion out of Blue Ridge Reservoir that imports water from the Little Colorado River Basin to partially compensate for withdrawals from the Salt River Basin by Phelps Dodge Corporation for its mines near Morenci. Imports to the East Verde River occur approximately 33 miles upstream of the upper end of Segment #3. Imports typically begin in April and continue through October. Median flow in the East Verde during the low flow summer months ranges from 2-6 cfs without imported water. With the imported water median flows range from 26-28 cfs. Although these imports do not physically affect the free-flowing character of the potential River Area they do substantially augment the volume of water flowing through the segment.

C. Transportation Facilities: A portion of Forest Development Road #406 is a permit road, closed to vehicular use by the general public, which borders this segment and provides access to the private-land inholding.

D. Recreation Activities and Facilities: This proposed area is entirely within the Mazatzal Wilderness. Dispersed recreation activities include hiking and backpacking, fishing, and hunting. During short periods when water levels are suitable, skilled kayakers are able to run this stream. Primary access is gained by foot or horse travel. An estimated 50 recreation visitor days (RVD's) occur within the potential River Area. Authorized commercial activity consists of outfitter/guide fishing, hunting, and hiking related services.

E. Special Management Designations: 100% of this segment is within the Mazatzal Wilderness. This Wilderness embraces the north end of the Mazatzal Range and contains over 250,517 acres of the Tonto and Coconino National Forests. Established in 1938, the area is typified by rough mountains broken by occurrences of narrow canyons. Elevations range from 2,100 feet along the Verde River to 7,903 feet on Mazatzal Peak.

F. Mining: There are no acres within the potential River Area withdrawn from mineral entry. All acreage remain open to mineral entry.

There are no existing claims which have been identified (BLM, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. East Verde River Segment #3 is located within a zone identified as exhibiting low probability for economic petroleum reserves. Hot springs are located within five miles of the western boundary of the segment, however, geochemical evidence does not substantiate geothermal resources in the region. There are no active quarries within the potential River Area. Segment #3 crosses through the Polk Mineral District with a production record of 1,400 pounds of copper during the period of 1953 to 1966. This segment is within two miles of an open-pit mine which produced both silver and gold in 1967. The southern portions of Segment #3 have few or no known mercury deposits, but exhibit geologic terrane favorable for its occurrence. Volcanic rocks found in the area of the East Verde River are favorable for massive sulfide type mineral deposits similar to those found in Jerome, Arizona. Although no deposits of this type have been found in the area the favorable geologic terrane suggests that massive sulfide bodies may exist in the East Verde River sequence.

G. Special Uses: Special Use Permits issued within the potential River Area are:

U.S. Department of Interior - Stream gauging station
Loren Pratt - Road, provides access to the L.P. Ranch
Various outfitter/guide related services for fishing, hunting, and hiking.

R. Livestock Grazing and Agriculture: No agriculture occurs within Segment #3 of the potential River Area. There are two grazing allotments established within the potential River Area.

Bull Springs Allotment has 1,920 authorized animal unit months (AUM's). Approximately 7% of the allotment is within the potential River Area, which would equate to 134 AUM's of grazing annually. The allotment has a small amount of fence and watergap improvements within this segment.

Cedar Bench Allotment has 3,500 (every other year) authorized AUM's. Approximately 14% of the allotment is within the potential River Area, which would equate to 490 AUM's of grazing annually. Improvements include a very limited amount of fence and watergap improvements at the boundary with Bull Springs Allotment.

I. Timber: The potential River Area is located entirely with the Mazatzal Wilderness which restricts timber harvesting, and as such, all 3,800 acres are not suitable for timber harvest.

SOCIAL AND ECONOMIC VALUES

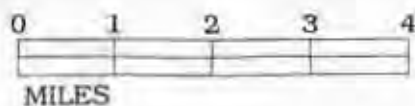
Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species 'exist', and in a similar manner, value is placed upon water with its associated 'instream' flow. Recreational users derive social benefits from the opportunities for solitude, relaxation, and viewing of scenery and wildlife in an area with preserved unique, natural conditions. Livestock permittees derive social benefits from evolving a way of life associated with the resources contained upon the National Forest lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$18.89 per recreation visitor day. An estimated visitation of 50 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$944.50 per annum.

Allotment fees are \$1.86 per animal unit month for a total of 586 animal unit months, occurring on the allotments within this segment of the potential River Area, resulting in \$1,089.96 per annum in fees being collected by the government. There is no suitable timber for harvest within the potential River Area.

FOSSIL CREEK

FOSSIL CREEK



FOSSIL CREEK

LOCATION

Fossil Creek is located on the Coconino and Tonto National Forest in Coconino, Gila and Yavapai Counties. The origin is Fossil Spring below Sand Rock and Calf Pen Canyons from where it flows southward to its confluence with the Verde River as part of the Verde River Basin.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 13.5 miles of Fossil Creek in two segments were evaluated for potential Wild and Scenic River designation. The first segment begins just below the Arizona Public Service dam and flume, a distance of about 1/2 mile below the springs themselves, and runs to the Mazatzals Wilderness boundary a distance of approximately 6 miles. The second segment was from the Wilderness boundary to the Fossil Creek's confluence with the Verde River, a distance of about 6.6 miles. Both segments were determined to be potentially eligible. Segment 1 with a classification as recreational and segment 2 with a classification as wild. A total of 2,000 acres, 70 acres of which is private land, is contained in the stream corridor of Segment # 1. A total of 2,200 acres, all National Forest Land are contained in the stream corridor of segment 2.

Fossil Creek is significantly altered by a water diversion of Arizona Public Service Company. Essentially all of the natural flows of Fossil Springs are diverted through a flume for power generation at the Irving Power Plant. This leaves Fossil Creek with a minor continuous flow (about 0.2 cfs), and full flows only during flood events. APS also has a diversion structure in the stream adjacent to the Irving Power Plant. The purpose of this structure is for back up if the flume is out of service and water is allowed to flow freely down the creek bed to the power plant.

Both segments were found to have the following outstandingly remarkable features:

1. **Geologic Values:** The geologic features of both segments are striking as a demonstration of geologic processes created by the steam itself, but the travertine deposits associated with the the upper segment and Fossil Springs in particular are considered as outstandingly remarkable.
2. **Fishery Values:** Fossil Creek has been identified as having the potential for providing habitat for protected native fish communities and recovery of Threatened and Endangered species.
3. **Wildlife Values:** This stream provides habitat for nesting Black Hawks and River Otter, a recovering species in the state.
4. **Historic Values:** The Irving Powerplant which is located adjacent to this stream has been in operation since the teens. The Childs-Irving Hydroelectric facilities are listed on the National Register of Historic Places and are designated as a National Mechanical Engineering Landmark. A number of Southern Sinagua sites are also located along the stream course.
5. **Riparian Values:** The riparian community adjacent to Fossil Creek is abundant, healthy and diverse. The extremely good condition of the riparian vegetation makes this an outstandingly remarkable value.

DESCRIPTION OF RESOURCES AND VALUES

Geology: Segment #1 of Fossil Creek is unique in the presence of travertine, a chemical compound that precipitates from the water when aerated or obstructed to form a rock formation and altering the morphology of the stream channel. During the last 90 or so years during the hydropower operation, very little travertine has deposited since the water has largely been diverted into a flume to the generators. Only remnants of the old deposits are present.

Steamflow: At Fossil Springs the normal perennial rate of flow is 43 cfs that discharges into Fossil Creek. This rate of flow was determined by Arizona Public Service Company at their diversion point located .2 miles below the springs, where the flow is reduce to .2 cfs.

Vegetation: Despite the removal of most of the water from the stream course, sufficient water moves through the subsurface to maintain riparian vegetation. Primary plants include shrub live oak, mesquite, agave prickly pear, catclaw acacia, juniper, pinyon, cottonwood, and sycamore.

These riparian and ecological values are Outstandingly Remarkable Values in this area because riparian vegetation has never been very abundant in Arizona. The thin ribbons of green along Fossil Creek are largely undisturbed by man's activities.

Fisheries and Wildlife:

Fish:

The headwaters of Fossil Creek are unique in that it is one of the few stream reaches remaining in Arizona which supports an entirely native fish community. Native fishes present in the headwaters include speckled dace, desert sucker, roundtail chub and razorback sucker. Of special concern are the razorback suckers which were introduced into the headwaters in 1988 and are federally listed as endangered, and the roundtail chub which is a candidate for federal listing.

Despite the diversion of water for hydropower generation, Fossil Creek below the headwaters still supports roundtail chub, speckled dace, longfin dace, desert sucker, and Sonora sucker. The Forest is presently working with Arizona Public Service to improve instream flows for the native fishes, and has recommended that the U.S. Fish and Wildlife Service consider Fossil Creek as critical habitat for the razorback sucker. Non-native species in Fossil Creek include green sunfish and smallmouth bass.

Wildlife:

1. Fossil Creek segment 1: The extremely high diversity of habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the common black-hawk, American peregrine falcon, Fossil Springs snail, narrow-headed garter snake, Chiricahua leopard frog and Mexican garter snake. The area within the canyon adjacent to Fossil Creek also provides habitat for the northern goshawk and Mexican spotted owl.

The area provides habitat for game species such as deer, black bear and mountain lion. The riparian community associated with Fossil Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

2. Fossil Creek segment 2: The high diversity in habitats associated with this stream provides for a corresponding high diversity of wildlife habitats and abundance of wildlife species. TES species include the common black-hawk, American peregrine falcon, Fossil Springs snail, and Mexican garter snake.

The area provides habitat for game species such as deer, black bear and mountain lion. The riparian community associated with Fossil Creek provides breeding areas, winter habitat and migration corridors for a tremendous variety of birds, and water, food and refugia for mammals, reptiles and amphibians. Because of the presence of perennial water the areas influence on wildlife extends far beyond the riparian corridor into adjacent habitats.

Visual Resources: The visual quality characterized by a riparian zone composed of an extensive variety of colors and textures of vegetation, crystal clear perennial water, and an enormous diversity and contrast between the streamzone and the bordering hills provide a full and rich spectrum of landscape form, line, color, and texture to yield an interesting landscape and outstanding visual quality.

Heritage Resources: Fossil Creek is of very high heritage value, both in terms of its prehistoric Southern Sinagua sites and its historic features, mostly related to the Childs-Irving Hydroelectric facilities. Predicted site densities are high to very high with an excellent reliability for this prediction. Almost every site type known for the Southern Sinagua culture can be found within the corridor - field houses, 12 to 30 room pueblos, rock art, fields, forts, and numerous rock shelters and cavates (small shelters that have been enlarged by humans and that are usually walled-up). While sites from A.D. 1150 to 1300 are most frequent, earlier sites, dating back to A.D. 800, and very late sites, A.D. 1300 to 1400 are also present. Current archaeological theories predict significant clues to the last phase of the Sinagua culture may be hidden within the rugged canyons of the lower Verde River area, especially Fossil Creek. Historic period sites are mostly related to the Childs-Irving Hydroelectric facility, owned and operated by Arizona Public Service Co. These include flumes, pipes, reservoirs, power lines, tunnels, power plants, transformers, a lake, dams, buildings, and other features. The Childs-Irving Hydroelectric facilities are truly unique and significant to the development of central Arizona. They are presently listed on the National Register of Historic Places and have been designated as a National Historic Mechanical Engineering Landmark. Most of the facilities were constructed between 1908-1909 for the Child's section, and between 1915-1916 for the Irving Section. These plants have been in continuous operation ever since.

LAND USES AND DEVELOPMENT

Land Ownership: Fossil Creek is 93% National Forest. About a one mile section is private, of which a half mile may become public through a land-exchange in progress. Current ownership is as follows:

	<u>N.F. LAND</u>	<u>PVT. LAND</u>	<u>TOTAL</u>
Segment 1	1,930 Ac.	70 Ac.	2,000 Ac.
Segment 2	2,200 Ac.		2,200 Ac.
Total	4,130 Ac.	70 Ac.	4,200 Ac.

Water Rights and Water Resource Development: Presently APS is diverting all 43 cfs of Fossil Creek's flow for the use of power generation at the Irving and Childs Power plants. Currently, in the application for new license, there is a proposal of letting 10 cfs continue down the stream channel for the benefit of fish and wildlife habitat.

Transportation Facilities: Segment 1 of Fossil Creek is accessible intermittently by trail and road: the upper reaches via Flume Road trail, at Irving and a few other places along Fossil Creek via Forest Road 708.

Segment 2 has neither road nor trail access.

Recreation Activities: Segment 1 - Fossil Springs is a popular destination for hikers, attractions being the sudden emergence of 43 cfs of spring water from the ground, the riparian vegetation and the unique travertine formations. While most of the activity takes place above the diversion, some people hike down the stream course. The stream is fairly heavily used for swimming and picnicking below the bridge at Irving Power Plant.

Segment 2 receives only light recreation use by those looking for a primitive experience.

Current Special Management Designation: The Fossil Springs Botanical Area is located within segment 1 (26 acres).

Segment 2 is located within the Mazatzal Wilderness designated by the original wilderness of 1964.

Mining: There is little no known mining activity. The portion within the Mazatzal Wilderness is withdrawn from mineral entry (segment 2).

Special Land Uses: Fossil Creek is heavily influenced by the Arizona Public Service Company's hydropower operations. The power generation activities are authorized under a license issued by the Federal Energy Regulatory Commission, who is in the process of re-issuing the license to APS.

Livestock Grazing and Agriculture: Two portions of Fossil Creek are currently affected by livestock grazing. The upper portion in the vicinity of Fossil Springs is part of the Deadman Mesa Allotment on the adjacent Payson Ranger District, Tonto National Forest. While livestock have traditionally had access to the creek, actions are in-progress to eliminate that access through fencing.

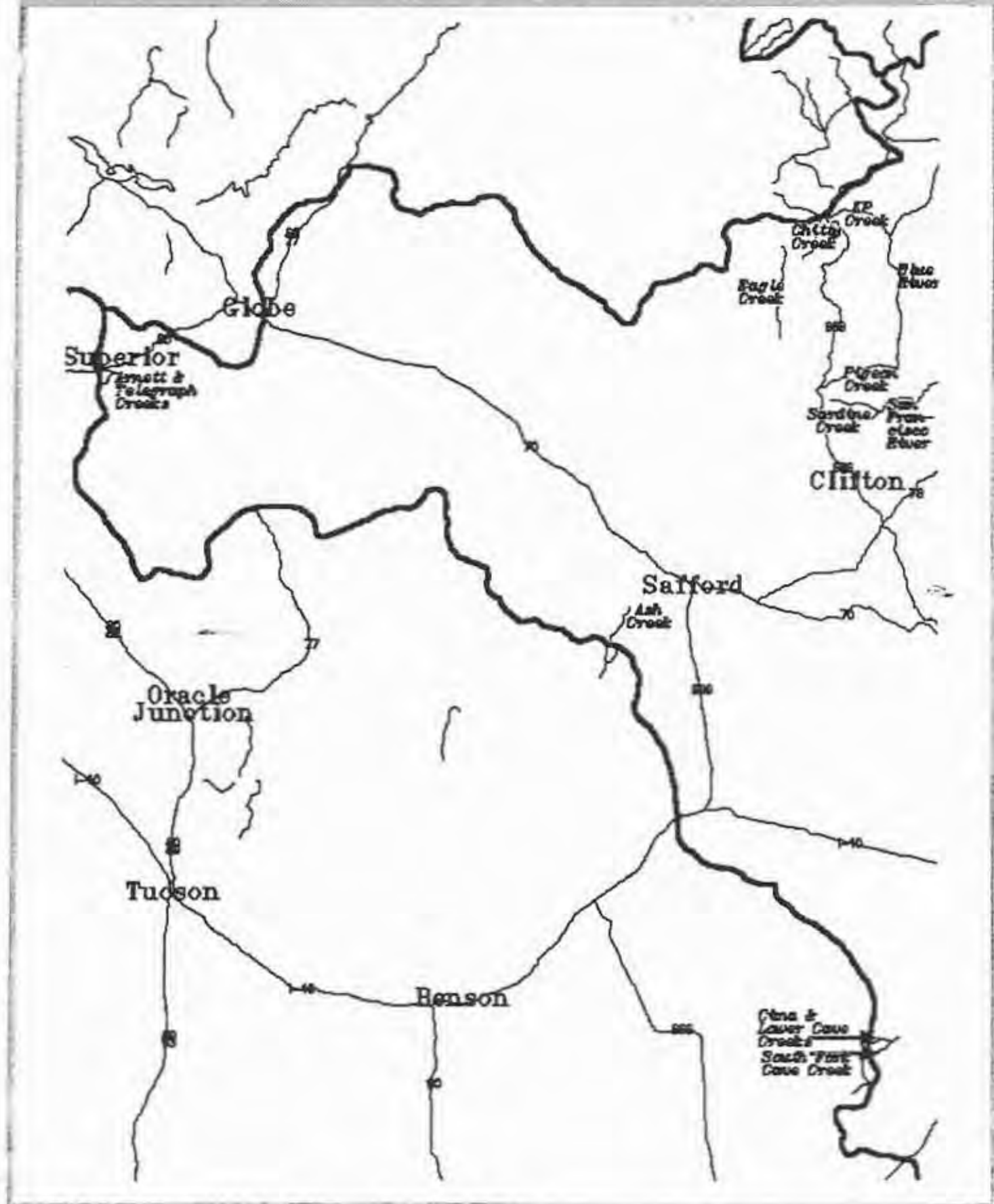
The lower portion is part of the Fossil Creek Allotment. Cattle have access to the creek between the private land and just above the intersection of Forest Roads 708 and 502. Livestock graze this area less than 15 days per year, sometimes in the spring/early summer and other times in the winter.

Timber Harvest: There is no commercial timber in this area, nor is it important for firewood gathering.

SOCIAL AND ECONOMIC VALUES

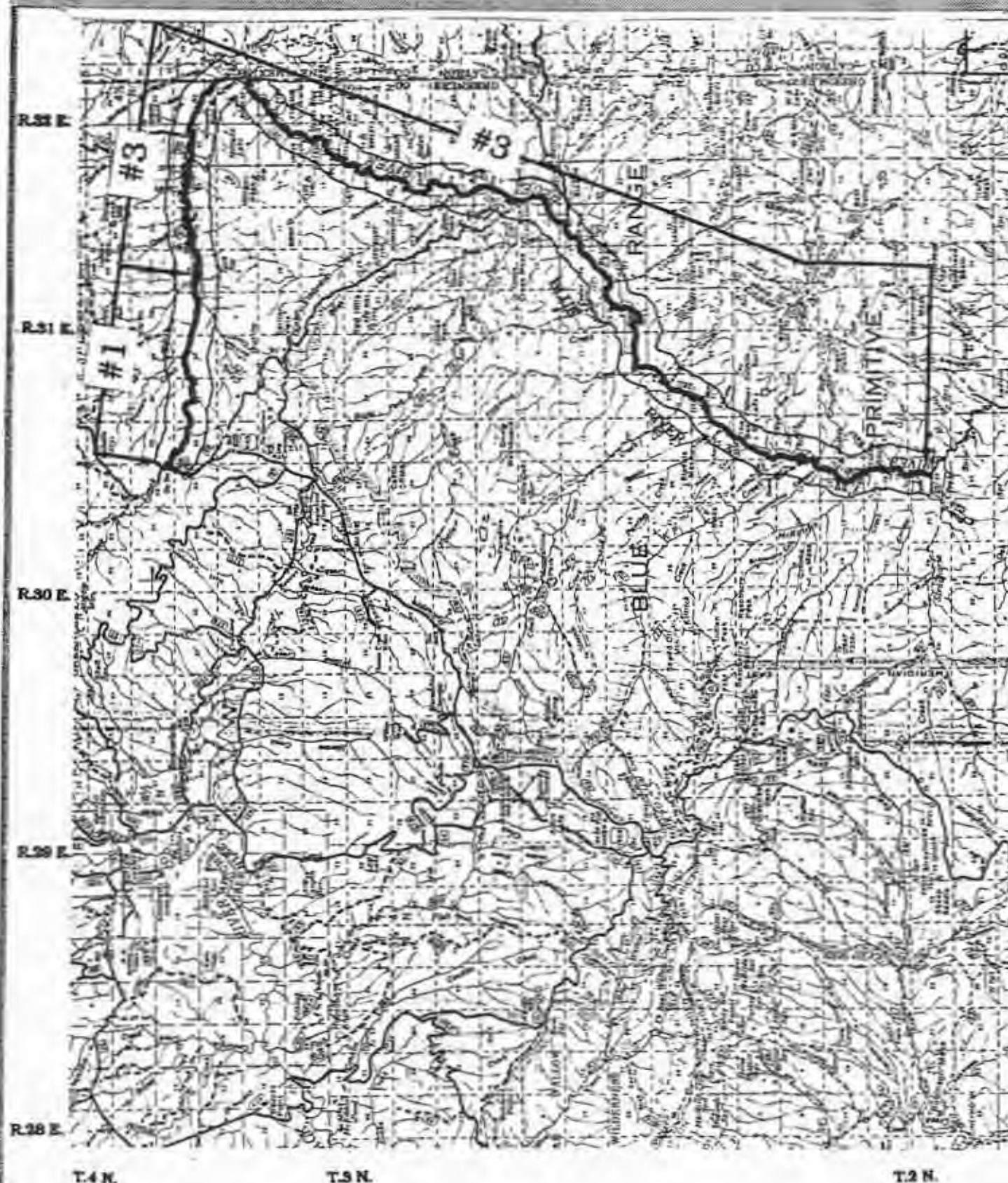
The area contributes little to any of the local economies. It is accessible from either Camp Verde or Strawberry and is becoming more well known as a result of media exposure. It is of local interest.

UPPER GILA RIVER BASIN



BLUE RIVER

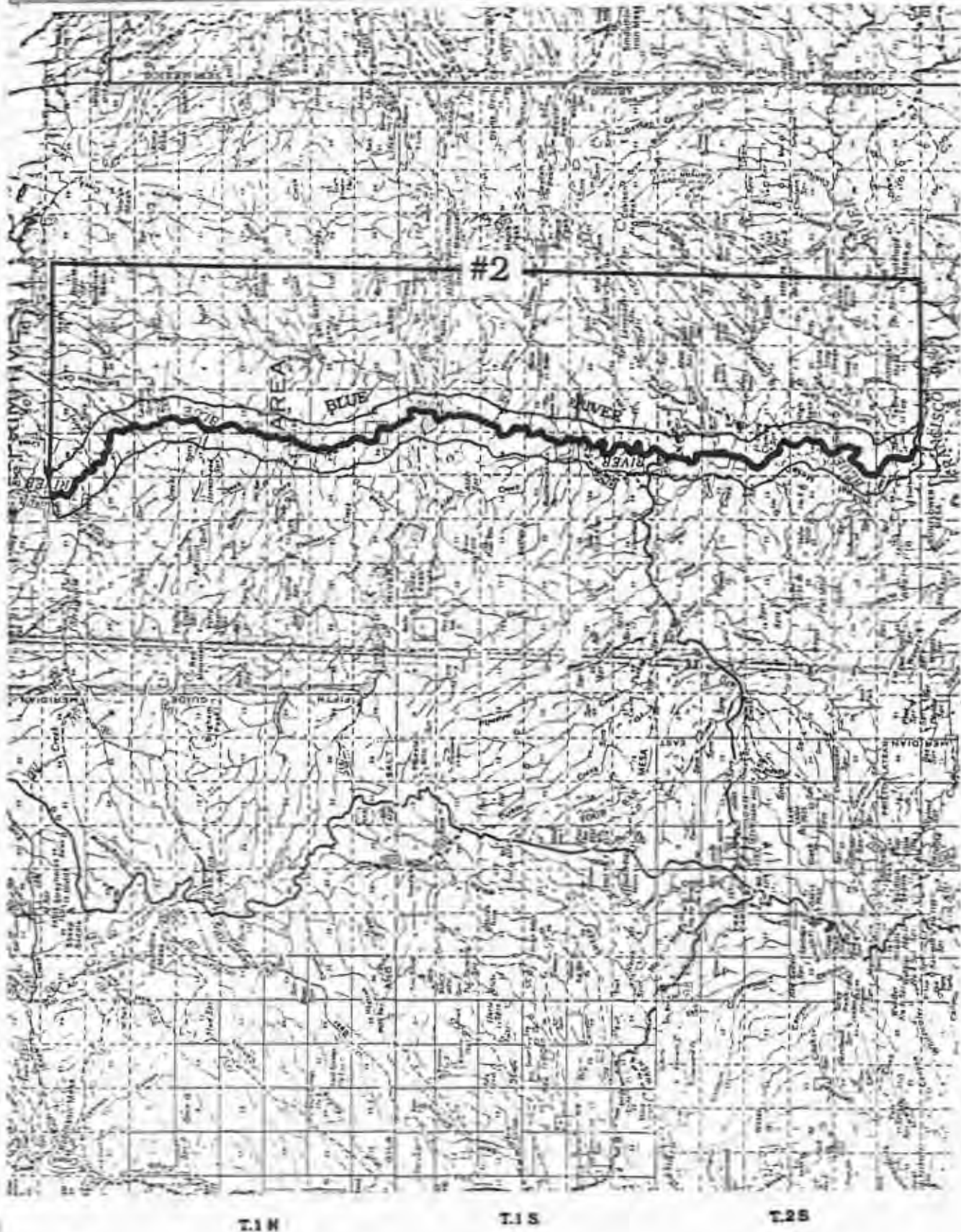
BLUE RIVER



0 1 2 3 4
MILES



BLUE RIVER



BLUE RIVER

LOCATION

The Blue River originates south of Alpine, Arizona, near Middle Mountain. From its origin, it flows southeasterly for approximately 17 miles to the confluence with Dry Blue Creek in New Mexico and then flows southerly about 43 miles to the confluence with the San Francisco River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 53.5 miles of the Blue River from the Campbell Blue crossing of Highway 191 to the confluence with the San Francisco River were evaluated for potential designation.

Eligible Segments: #1: Campbell Blue/Highway 191 Jct. to Luce Ranch
4.5 miles
#2: Smith Place to confluence with San Francisco
30 miles
#3: Above the Luce Ranch through the Smith Place
19 miles

Eligibility: The Campbell Blue and Blue River have several minor diversions on private lands that are used for irrigation purposes. They have not affected the free-flowing nature of this stream.

The outstandingly remarkable values include: All segments: Scenic, Recreation, Fish and Wildlife, Riparian, Historic and Cultural

Classification: Segment #1: Scenic
#2: Scenic
#3: Recreational

Total stream corridor (1/4 mile on each side) includes 17,120 acres, of which the Forest Service administers 90 per cent.

The Blue River has been a significant part of life for the area since prehistoric times of the Mogollon culture until today. The upper stretch of the Blue is in the Blue Range Primitive Area. There is very limited access for vehicle use in the area. There are a number of historic homesteads along the river and a remote Ranger station of the early 1900's.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The upper portion of the study area consists of fossiliferous alluvial and lacustrine deposits of middle or early Pliocene age within valleys of the present drainage system and correlative conglomerate, sand, silt, and clay.

The mid portion is basic igneous rocks that occur as irregular shaped lava flows. These rocks consist essentially of dark-colored, fine-grained, vesicular basalt and andesite with local interbeds of sedimentary materials and tuff. The older volcanic rocks consist of both basalt and andesite, which are extensively eroded and the rock layers may be inclined at varying angles due to block faulting and tilting. Locally, the surfaces of the basic lava rocks may be decomposed into a sticky, plastic clay.

The lower portion is of Tertiary and Cretaceous Age, acid volcanic rocks, that occur as irregularly shaped flows. The flows consist principally of light colored andesites which locally include stratas of tuff and agglomerate. These are intensely eroded, faulted, and broken.

Streamflow and Water Quality -The Blue river is a perennial water course with a greatly varied flow rate, depending on winter and summer rains and the snow pack in the higher elevations. The average river depth is 6-24 inches, with the width varying from 15-50 feet. The average flow of the Blue River is 51 cfs (cubic feet per second).

Vegetation - The vegetation at the stream margin consists of seep-willow, narrow leaf cottonwood, Fremont cottonwood, Arizona Sycamore, and alder.

The lower Blue River watershed consists of 197,600 acres. Of this, 87,408 acres are located in the Blue Range Primitive Area. The watershed here is comprised of scattered juniper, pinyon pine, oaks, mountain mahogany, buckbrush, desert ceanothus, grey oak, Wright's silktassel, and manzanita interspersed with perennial grasses. Ponderosa pine occurs on the steeper north facing slopes and canyon bottoms on the northern extremities. Most of the watershed is within the southern woodland type.

The Campbell Blue drainage is comprised of mostly pine communities on the hill sides above the stream and willow and alder associations in the riparian zone. This general vegetation description gradually changes to lower, drier types such as pinyon, juniper, and cottonwood in the vicinity of Upper Blue Campground.

Fisheries and Wildlife - The Blue River through this segment is not stocked with fish by the Arizona Game and Fish Department. The current game fish population consists of channel catfish and rainbow trout.

During 1987 Arizona Game and Fish Department personnel recaptured one razorback sucker from a prior experimental stocking. Speckled dace, loach minnow, Gila sucker, Gila mountain-sucker, rainbow trout and native fish were collected during a 1989 survey.

Animals outside of the buffer zone - The watershed also supports mule deer, and a few whitetail deer in addition to bighorn sheep, javelina, turkey, Gambel's quail, meadow quail, coyote, bear, and lion. The northern portion of the watershed provides good winter range for elk.

Threatened and Endangered Species: The Mexican Black Hawk nests within the steep canyon slopes. Bald Eagles use the area extensively during the winter months. The Blue River has been identified in recovery plans for the Loach Minnow.

Visual Resources - The diversity of the textures, colors, and forms represented in the canyon's trees and shrubs is in contrast to the dark volcanic walls along the river. Ladrón Spring has a nice 10 foot waterfall on the right side of the Blue just below the boundary of the Clifton and Alpine Ranger Districts. An exceptionally beautiful display of red canyon walls occurs near the Blue Box (KP Canyon).

Cultural and Historical Resources - The Blue River represents a major perennial water source which figured significantly in the lifeway of the prehistoric Mogollon culture. Their traditional homeland encompassed the vast area bisected by the Blue. The majority of the river remains uninventoried in terms of formal survey for heritage resources. The upper length lies within the Blue Range Primitive Area, and the remainder occurs through rough and largely uninhabited country. During prehistoric times, however, this river corridor provided all life-sustaining resources including hunting, wild resources, reliable water for agriculture, building materials and suitable locations for habitation sites. Typical sites would include rock shelters, sherd and lithic scatters, pit-house villages, and rock masonry room blocks or pueblos.

In the late 1800's several small homesteads were established along the Blue River. They were primarily associated with early cattle ranching activities, and are an important part of the history along the Blue River. One such ranch the XXX Ranch (also know as the Fritz Ranch) is on the west side of the river and is currently in the process of being nominated to the National Register of Historical Places. Early Forest Service history is also present along the Blue. The Baseline Ranger Station was established in the 1900's. It was located on the east side of the river at the boundary of the Primitive Area in T1S, R31E, Section 8.

There are several historic ranch headquarters on the upper and middle portions of these segments. These buildings are still in use today and help to remind visitors of the cattle heritage of this area. Numerous (perhaps hundreds) of prehistoric sites occur along the Blue River. Also, evidence of the high quality construction work of the Civilian Conservation Corps exists in the 2 campgrounds on the Blue and adjacent roadways.

Air Quality - The area is not monitored by the state for pollutants. It is in a Class II Air Quality category which includes all areas other than Class I. Class I areas are specified national parks, wilderness areas, and certain Indian reservations.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Apache-Sitgreaves National Forests.

River Corridor Acreage- segment #1: 1440 acres, all NF
#2: 9600 acres, all NF
#3: 6080 acres, 75% NF

Water Rights and Water Resource Developments - The Blue River is a tributary of the San Francisco River, which drains into the Gila river below the town of Clifton. The town of Clifton is dependent upon the San Francisco River for its domestic water supply. In addition, waters from the Blue and San Francisco Rivers are used by the community in and around Safford for irrigation and domestic water. Several ranches on the Blue River divert water onto their fields to irrigate pasture and hay. Numerous water rights certificates are held by local residents.

The Forest Service has four Certificates of Water Rights on the Blue River. It is used for livestock and agriculture within the Blue Range Watershed. In addition there are several water rights existing on the Blue River for irrigation, domestic and wildlife use. All allotments in the Blue River Watershed have stock tanks and improved springs to water livestock. The majority of the stock tanks drain an area of less than 500 acres.

CERTIFICATE OF
WATER RIGHT #

OWNER

STREAM

LEGAL LOCATION

ACRE FEET

CWR BB-528	USFS	BLUE RIVER	1N 30E SEC 24	28 AC/FT
CWR BB-529	USFS	BLUE RIVER	1N 30E SEC 36	40 AC/FT
CWR BB-529	USFS	BLUE RIVER	1S 30E SEC 30	20 AC/FT
CWR BB-530	USFS	BLUE RIVER	2S 31E SEC 31	28 AC/FT

(The above are for segment 2 only.)

The Blue River is likely to nearly always meet State water quality standards and only infrequently exceed one parameter or another during relatively short durations. An example of a parameter which may be exceeded on occasion is turbidity, which may peak during short duration high flows, then naturally recede to allowable levels. Test results for the elements and common chemical constituents for which there is information are nearly always within State standards and very often below threshold limits.

The Campbell Blue (segment #1) has an average flow of 2.9 cubic feet per second (cfs), a maximum discharge average of 62.6 cfs (peak of 342 cfs in 1973), and a minimum flow average of 0.06 cfs (low of 0.0 cfs). Source: USFS stream records located at Forest Supervisor's office, Springerville, Az.

The Blue River at Juan Miller Road (segment #2) at USGS Station 09444200 measured the following: average discharge from 1969-1991 was 76.2 cfs; median of yearly mean discharges was 43 cfs; extremes: maximum discharge was 30,000 cfs on 10/20/72; minimum discharge was 1.4 cfs on 10/18-20/78.

Transportation Facilities - From the Smith Place down to the boundary of the Blue Range Primitive Area is Non-mechanized access only due to management requirements of a primitive area. The river is closed to motorized vehicle use, from the primitive area boundary south to the confluence with the San Francisco River, with the exception of the Juan Miller road crossing. Access from the west side is from U.S. Hwy 191 via trails, and the Juan Miller County Road. The trails are Strayhorse Trail #20, and A D Bar Trail #14. Access from the east side is via Forest Service road #104 then by trails, which are Bear Valley Trail #55 and Baseline Trail #310.

Forest Roads 281 and 232 parallel the Blue River from the Luce Ranch to the Smith Place, providing vehicle access to all of segment #3. Segment #1 is accessible only by foot or horseback. Six trailheads in segment #3 access the Blue Range.

Recreational Activities - The recreational activities that occur along various portions of the river include hunting, horse back riding, hiking, fishing, and advanced canoeing during certain seasons. Recreational use is low to moderate.

Current Special Management Designations - The river is divided into two management areas. There are 13 miles of the river in the Blue Range Primitive Area. The remaining 17 miles of the river are not a special management designation, but are closed to motorized vehicle use.

Mining - The Bureau of Land Management mining claim printout dated February 1993, does not show any active mining claims along this corridor.

Special Land Uses - Segment 2:

T2S R31E Sec 6 - U S Geologic Survey - Stream gauging station
T2S R31E Sec 6 - Arizona Department of Water Resources - Stream gauge
T3S R30E Sec 6 - Arizona Department of Water Resources - Stream gauge

Segment 3: Two special use authorizations exist within 1/4 mile of the stream: 1) spring and water transmission line at the Kilgore Ranch; 2) water diversion structure near the Grant Creek trailhead.

Livestock Grazing and Agriculture - Segment #1 has the following allotments and permitted animals: Heap (245 animals); Powder River (200); Turkey Creek (402). Segment #3 has the following allotments and animals: Bobcat (235); Bush Creek (4 horses); Red Hill (11); Foote Creek/CowFlat (224); Steeple Mesa/Fishhook (230); Bear Creek (114); and KP/Raspberry (250). Only a portion of these permitted animals are actually using the river corridor at any one time.

Segment 2: The Blue River crosses through and borders three grazing allotments on the Clifton District - the Sandrock, Pigeon, and Wildbunch.

The Sandrock Allotment has been deferred from livestock grazing since about 1983, and includes about 11.75 miles of Segment 2. About 6 miles of the Blue River, Segment 1, are encompassed by the Wildbunch allotment, but only about 50-70 head access the river seasonally. Changes in future management are imminent, especially much intensified management along the riparian zone. Pigeon allotment encompasses about 5.0 miles of the Blue River, but the river is not grazed during any season.

Three allotment boundary fences cross the Blue River, one on the north Clifton Ranger District boundary, one south of the Juan Miller Road river crossing, and one at the confluence of the Blue and the San Francisco Rivers. Several miles of pasture division and allotment boundary fences occur within the river corridor. In addition there are two Forest Service cabins located within the river corridor, the Triple XXX Ranch and the H U Bar Cabin.

Timber Harvest - Timber has been harvested within a portion of segment #1 and this portion is allocated to the suitable and available timber base in the Forest Plan. The remaining land with commercial potential is not accessible. Fuelwood is harvested on a regular basis in segment #3.

In Segment #2 there are several hundred acres of commercial size timber on the watershed, but due to terrain and accessibility no timber harvest program is planned for the area. Portions of the watershed are suitable for fuelwood harvest, depending on terrain and accessibility. Primary fuelwood species include pinyon pine and juniper.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of Morenci, Clifton, Duncan, and Safford, Arizona. Users from Glenwood and Reserve, New Mexico, also frequent the area. Other users include individuals from the urban centers of Phoenix, Tucson, and Albuquerque. Users of segments #1 and #3 come from Alpine, Springerville, and Eagar (locally) and from Phoenix and Tucson during hunting season.

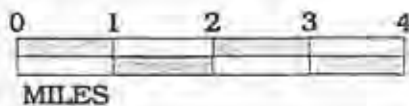
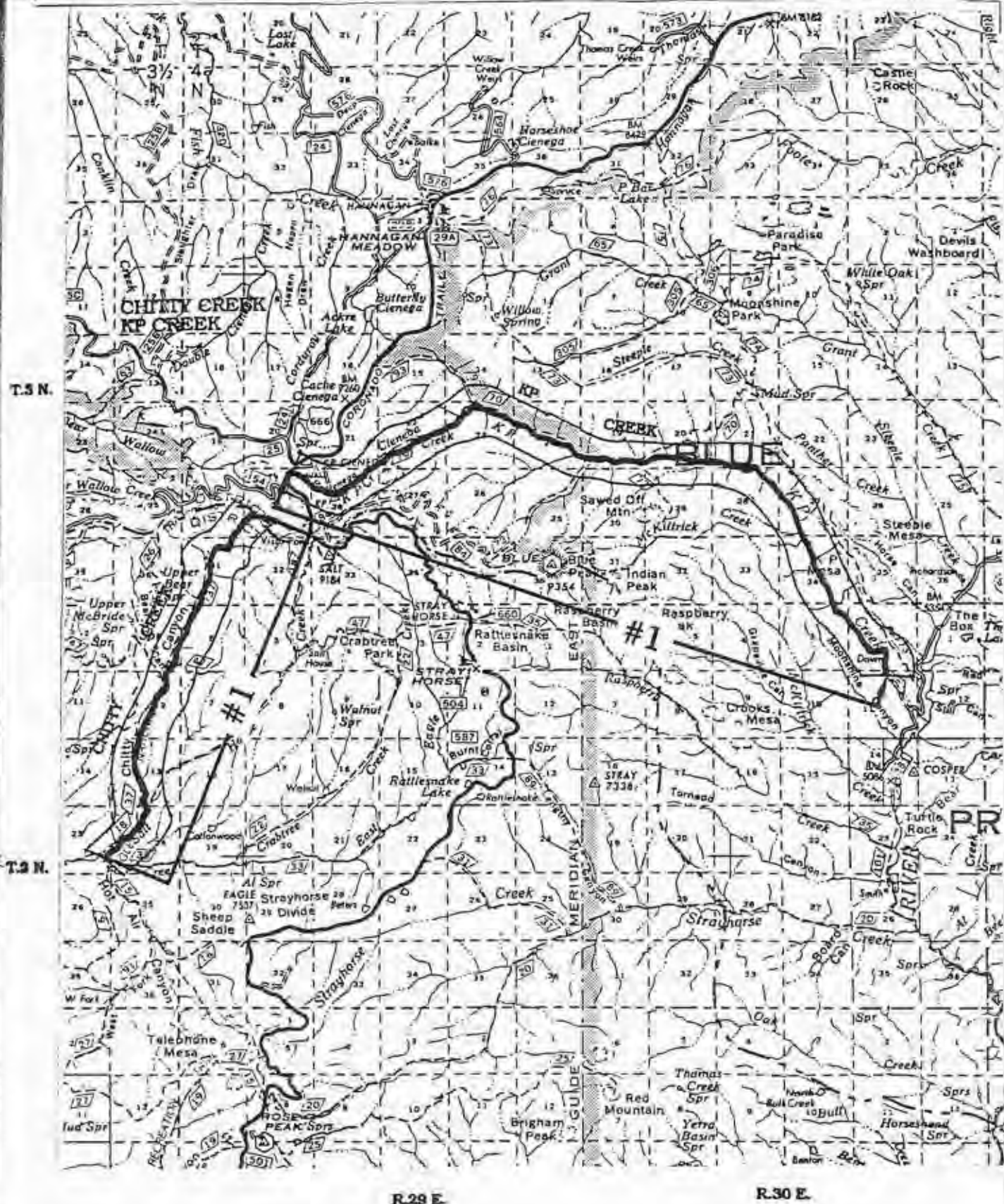
REFERENCES

Segment #2 discharge data - Water Resources Data, USGS Water Data Report AZ-91-1, AZ Water Year 1991.

Geology - Arizona Materials Inventory of Greenlee County, Arizona Highways Department, Materials Division, May 1966.

CHITTY CREEK

CHITTY CREEK



CHITTY CREEK

LOCATION

Chitty Creek - Greenlee County, Apache-Sitgreaves National Forests.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 6.2 miles of Chitty Creek, from the headwaters to East Eagle Creek, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments :

Chitty Creek - 7.0 miles
- from headwaters to East Eagle Creek

Eligibility :

All seven miles of Chitty are freeflowing and without impoundments or diversions

The outstandingly remarkable values include:

Scenic, Recreational, and Wildlife

The headwaters of Chitty Creek start high on the edge of the Mogollon Rim. It then flows south past Upper Bear Springs and over Chitty Falls, a 15 foot waterfall. The almost year round water flow is important to the vegetation, native fish species and abundant wildlife.

Classification :

Chitty Creek - Wild

DESCRIPTION OF RESOURCES AND VALUES

Geology - The southern part of the study area is fossiliferous alluvial and lacustrine deposits of middle or early Pliocene age within valleys of the present drainage system and correlative conglomerate, sand, silt, and clay. The northern portion consists of basic igneous rocks that occur as irregular shaped lava flows. These rocks consist essentially of dark-colored, fine-grained, vesicular basalt and andesite with local interbeds of sedimentary materials and tuff. The older volcanic rocks consist of both basalt and andesite, which are extensively eroded and the rock layers may be inclined at varying angles due to block faulting and tilting. Locally, the surfaces of the basic lava rocks may be decomposed into a sticky, plastic clay.

Streamflow and Water Quality - The flow within Chitty Creek is perennial the five miles above the riparian closure, but becomes ephemeral below the closure near Salthouse Canyon. Depending on winter moisture and summer rains, the lower end of Chitty becomes intermittent. Length of flow through the year averages nine months.

Vegetation - Channel vegetation in Chitty creek includes an overstory of Rocky Mountain maple, narrowleaf cottonwood, walnut, alder, and boxelder. The channel also includes some old growth cottonwood galleries. Shrub understory consists of scarlet sumac, young juniper, birchleaf buckthorn, and Gamble's Oak. Terraces along the creek support ponderosa pine, narrowleaf cottonwood, walnut, and Gambles's Oak.

A Forest Service livestock enclosure is located along Chitty Creek approximately 3/4 mile north of the Chitty/Salthouse creek confluence. This enclosure was established about 1976 to study the exclusion of livestock on riparian recovery.

The surrounding uplands support mostly an overstory of ponderosa pine, browse species, pinyon pine, and juniper. Canyon stringers consist of ponderosa pine and scattered pockets of mixed conifer at the higher elevations.

Fisheries and Wildlife - Trout taken within Chitty Creek are tentatively identified as Gila X Rainbow hybrids. A definitive analysis of the taxonomic status of this trout is lacking.

The upland area around Chitty supports mule deer, white tail deer, elk, javelina, turkey, meadow quail, coyote, bear, and lion.

Threatened and Endangered Species that may occur in or adjacent to the Chitty Creek drainage, due to the existence of suitable habitat, include Occult little brown bat, Narrowheaded garter snake, Northern leopard frog, Lowland leopard frog, Northern goshawk, sharp-shinned hawk, and *Gentianella wislizeni*.

Visual Resources - The creek offers riparian habitat at the canyon bottom. The maples and shrubs provide fall colors. Chitty Falls, a 15 foot waterfall, is often a destination for hikers and packers.

Cultural and Historical Resources - Chitty Creek flows through a narrow and steep canyon with rugged sideslopes. No archeological inventory has been conducted in the area. Evidence of prehistoric occupation may be present, although no large village sites are expected. Rock shelters along the creek are likely, as well as evidence of activities of short duration such as prehistoric hunting and gathering camps. The most favorable location for sites along Chitty Creek would be at the confluence of Chitty and Salt House Creeks where the two canyons widen out and meet along more gently sloping terrain. Evidence of prehistoric occupation may be present at Chitty Creek Spring.

No historical period sites are known, although evidence of historic activities may be present near the confluence of Chitty and Salt House Creeks and north along Chitty Creek before the canyon narrows.

Air Quality - The area is not monitored by the state for pollutants. It is in a Class II Air Quality category which includes all areas other than Class I. Class I areas are specified national parks, wilderness areas, and certain Indian reservations.

LAND USES AND DEVELOPMENTS

Land Ownership - The creek is located on the Apache-Sitgreaves National Forests. The creek corridor is 7.0 miles and 2,240 acres. There are no private parcels of land within the creek corridor.

Water Rights and Water Resource Developments - Chitty Creek is a tributary of East Eagle Creek. There are no Certificates of Water Rights owned on Chitty Creek. Downstream water uses include mining, agriculture, and domestic uses. No diversion structures exist within the Chitty Creek river corridor. No dams or flood control structures are proposed.

Transportation Facilities - All access to Chitty Creek is on trails. The upper segment is reached by the Highline Trail #47. The Salt House Trail #18 reaches Chitty Creek a half mile from the confluence of East Eagle. East Eagle Trail #33 also accesses Chitty Creek. All of these trails are located on the west side of U.S. Hwy 191 (666). From the confluence of East Eagle and Chitty Creek, Chitty Trail #37 follows the National Recreation Trail for 1.7 miles, until the junction with a spur trail heading to McBride Mesa Trail #26.

Recreation Activities - Recreational activities that occur along the creek include hiking, hunting, and horse back riding. There is also a great variety of wildlife and bird watching. Recreational use is low.

Current Special Management Designations - There is currently a 10 acre riparian enclosure study area within the corridor. The closure was established about 1976. It is located one mile below Chitty falls and extends 1/2 mile along the creek. There was some reconstruction done on it in 1993. The National Recreational Trail is within the creek corridor for 1.7 miles.

Mining - The Bureau of Land Management mining claim printout dated February, 1993, does not show any active mining claims along this corridor.

Special Land Uses - None

Livestock Grazing and Agriculture - Chitty Creek is within the East Eagle Allotment. The pasture division fence is located approximately 1/4 to 1/2 mile west of the creek. A corral is located approximately 1/2 mile north of the confluence of Chitty Creek-Salt House Creek.

Salt House pasture encompasses Chitty Creek, and is grazed seasonally by livestock, with concerns to manage for improved or maintained riparian conditions. The allotment is currently destocked about 70%, with about 145 cattle being grazed yearlong on the East Eagle Allotment.

Timber Harvest - Lands which surround Chitty Creek are classified as marginally suitable for timber harvest. Suitability varies depending on terrain and accessibility to the area, however there is potential for pulpwood and sawlog harvesting. The upland areas are considered suitable for fuelwood harvest, depending on terrain and accessibility. Primary fuelwood species include Pinyon pine and Alligator Juniper.

SOCIAL AND ECONOMIC VALUES

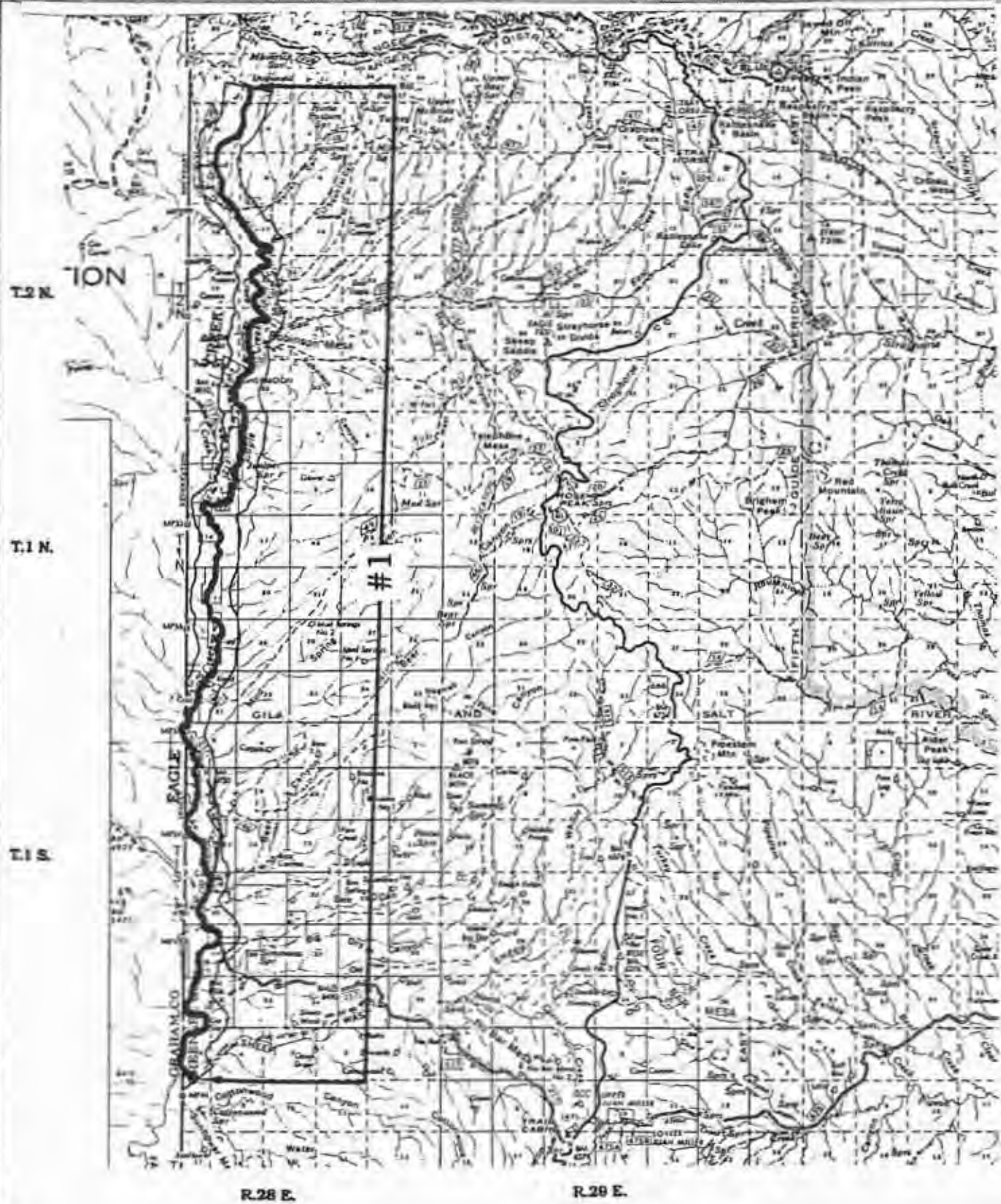
The local users are from the communities of Safford, Duncan, Clifton, and Morenci, Arizona. Users from Glenwood and Reserve, New Mexico, also frequent the area. Other users include individuals from the urban centers such as Tucson and Phoenix. The canyon is also known nationally because of the National Recreational Trail located in the canyon.

REFERENCES

Geology - Arizona Materials Inventory of Greenlee County, Arizona Highways Department, Materials Division, May 1966.

EAGLE CREEK

EAGLE CREEK



EAGLE CREEK

LOCATION

Eagle Creek - Greenlee County, Apache-Sitgreaves National Forests.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 26.0 miles of Eagle Creek, from the headwaters in T3N, R28E, Section 32, to the confluence with Sheep Wash in T2S, R28E, Section 5, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segment:

Eagle Creek - 26.0 miles
- From the headwaters to confluence with Sheep Wash

Eligibility:

Eagle Creek is freeflowing and without significant impoundments or diversions.

The outstandingly remarkable values include:

Eagle Creek - Riparian vegetation communities; Fish and Wildlife

The headwaters of Eagle Creek start high on the Mogollon Rim from a combination of many springs and streams. The nearly year round water of the area is important to the riparian habitats along the creek and to wildlife.

Classification:

Eagle Creek - Recreational

The total river corridor (1/4 mile on each side) includes 8,320 acres, of which the Forest Service administers approximately 70 per cent. The corridor can be broken into 2 segments for management purposes. The upper segment (from Honeymoon Campground north to the Rim) encompasses about 1/3 of the total drainage, and is seasonal and intermittent from the confluence of Dry Prong and East Eagle Creek. With the exception of about 10 acres of private land immediately north of Honeymoon campground, the remainder of this segment is entirely within National Forest lands.

The lower segment, from Honeymoon Campground south to the Forest boundary, flows year-round through private, Indian reservation, and Forest land. About 800 acres (2 miles of stream) is within the San Carlos Apache Indian reservation. Private lands within the lower segment corridor total about 1400 acres, or about 30% of the area.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The upper study area contains fossiliferous alluvial and lacustrine deposits of middle or early Pliocene age within valleys of the present drainage system and correlative conglomerate, sand, silt, and clay.

The upper-mid study area consists of basic igneous rocks that occur as irregular shaped lava flows. These rocks consist essentially of dark-colored, fine-grained, vesicular basalt and andesite with local interbeds of sedimentary materials and tuff. The older volcanic rocks consist of both basalt and andesite, which are extensively eroded and the rock layers may be inclined at varying angles due to block faulting and tilting. Locally, the surfaces of the basic lava rocks may be decomposed into a sticky, plastic clay.

The lower part of the study area consists essentially of semi-consolidated, sedimentary materials of fluvial originally deposited in a closed basin and now exposed because of stream down-cutting and erosion. These rocks are tentatively assigned to the "Gila" formation.

Streamflow and Water Quality - Water flow on Eagle Creek is primarily perennial, however, during dry periods flow becomes intermittent. The Phelps Dodge Corporation has a number of large wells in canyons along Eagle Creek on privately owned and Forest Service administered lands. These wells provide water when Eagle Creek water levels fail to supply the needs of the downstream Morenci Mine operation. Water from these wells is pumped into Eagle Creek to increase surface flow.

Vegetation - Overstory vegetation within Eagle Creek is dominated by narrowleaf cottonwood, walnut, and boxelder. Shrubs consist primarily of scarlet sumac. Terraces along Eagle Creek are dominated by ponderosa pine, narrowleaf cottonwood, juniper and sumac.

The entire watershed consists of 27,379 acres of chaparral, 2,035 acres of riparian, 65,407 acres of pinyon-juniper, 19,872 acres of ponderosa pine, and 26,807 acres of grassland vegetation. The northern one-third and north eastern part of the watershed contains most of the ponderosa pine along with pinyon pine, alligator juniper and chaparral. Most of the grassland type is located in the southern two-thirds of the watershed. This area is characterized by bunch grass species, chaparral, pinyon pine, and alligator juniper.

Fisheries and Wildlife - Every year in the spring, Arizona Game & Fish Department stocks rainbow trout in Eagle Creek. There is instant fishing pressure in the creek which lasts about three months. Due to climatic conditions, Eagle Creek is not a year round trout stream.

During a 1985 survey for the U. S. Fish and Wildlife Service, a Longfin dace, Speckled dace, and Gila mountain sucker were collected from Eagle Creek. In addition, in an AG&F survey in 1989, an adult razorback sucker was recaptured. The sucker was from a prior experimental stocking. Other native species historically collected from Eagle Creek include loach minnow, Gila chub, and razorback suckers. A survey in 1993 did not reveal any Threatened and Endangered Species such as the loach minnow or the razorback sucker.

Bear, mule deer and Rocky Mountain Elk are the main big game animals hunted in the area. In addition, the surrounding uplands support pronghorn antelope, turkey, javelina, white tail deer, meadow quail, dove, coyote, and lion. The creek offers excellent opportunities for bird watching enthusiasts.

Threatened and Endangered Species: The Mexican Black Hawk nests within the steep canyon slopes on the lower end of Eagle Creek. Bald Eagle winter in the area and use Eagle Creek extensively. Eagle Creek is proposed for designation as critical habitat for the Spikedace. In addition, other Threatened and Endangered Species that may occur here include Occult little brown bat, Spotted bat, silky pocket mouse, Mexican garter snake, Narrow-headed garter snake, Arizona southwestern toad, Chiricahua leopard frog, Northern leopard frog, Lowland leopard frog, Zoned-tailed hawk, Gentianella wixizeni, Gila groundsel, and Blumer's dock. Blue Heron have also been seen in the area.

Visual Resources - The Eagle Creek watershed is characterized by steep, rough canyons near the headwaters through the riparian areas and finally into the grasslands at the lower end. The varying vegetation types create many different colors and textures during the seasons.

Cultural and Historical Resources - A substantial prehistoric occupation is known to have occurred along Eagle Creek. However, due to the fact that U.S. Forest Service has only recently acquired several parcels of private land, little archeological inventory has been conducted. The broad, fertile valley present along much of the creek would have provided optimal conditions for agriculture, a consideration of great importance to prehistoric societies as populations grew and villages became larger and more permanent. The area would also have been favorable for hunting, gathering wild plant foods, and providing virtually all life sustaining resources. Approximately twelve centuries of occupation are represented. The cultural affiliation is Mogollon, with evidence of earlier Archaic presence. Site types include artifact scatters (often covering several acres), erosion control features, agave roasting pits, masonry field houses, small roomblocks, and multi-roomed pueblos. Extensive pothunting has taken place at some site locations.

Eagle Creek is equally favorable for historic settlement. In the late 1800's and early 1900's, ranches and homesteads were established along the creek. Today, these same old homesteads and ranches comprise many acres of private land along the creek, with cattle raising still an important way of life. Forest Service history was also part of the historical record along Eagle Creek, with the construction of the Honeymoon Ranger Station in 1907, and the Eagle Creek Ranger Station several years later.

Air Quality - The area is not monitored by the state for pollutants. It is in a Class II Air Quality category which includes all areas other than Class I. Class I areas are specified national parks, wilderness areas, and certain Indian reservations.

LAND USES AND DEVELOPMENTS

Land Ownership - Eagle Creek is located in the Apache-Sitgreaves National Forests (Greenlee County) and on the San Carlos Apache Indian Reservation (Graham County). The corridor within the Forest encompasses 26.0 miles and contains 7,727 acres, including private land parcels and a small segment of Reservation accessible from Eagle Creek County road. There are approximately 1,468 acres of private land and 826 acres of San Carlos Indian Reservation in this segment. The Reservation encompasses approximately 25 miles of Eagle Creek not readily accessible from Forest or County maintained roads.

The private land is located in:

T2N, R28E, Section 31 - 58 acres,
 Section 32 - 11 acres,
 T1N, R28E, Section 5 - 43 acres,
 Section 6 - 100 acres,
 Section 7 - 140 acres,
 Section 8 - 13 acres,
 Section 18 - 93 acres,
 Section 19 - 158 acres,
 Section 30 - 155 acres,
 Section 31 - 178 acres,
 T1S, R28E, Section 5 - 143 acres,
 Section 8 - 101 acres,
 Section 17 - 113 acres,
 Section 29 - 10 acres.

[San Carlos Indian Reservation land is not included.]

Access - Five road crossings across Eagle Creek are maintained several times each year to provide access to private lands in the corridor and to Forest Service facilities.

Water Rights and Water Resource Developments - There are twelve privately owned Certificates of Water Rights on Eagle Creek used for irrigation and domestic use. This use includes several instream diversion structures. The Forest Service also has one Water Right for livestock and agricultural use. All allotments in the Eagle Creek Watershed have stock tanks and improved springs to water livestock. The majority of stock tanks drain an area of less than 500 acres. In addition the Forest Service has 100,000 gallons per annum of water rights on Rattlesnake Canyon for domestic use and 400,000 gallons per annum for livestock and wildlife at the Strayhorse Administrative Site. Water rights are held for Smith canyon for 100,000 gallons per annum for domestic use and 400,000 gallons per annum for livestock and wildlife use at the Trail Cabin Administrative Site.

Phelps Dodge Corporation has a number of large wells in canyons along Eagle Creek on privately owned and Forest Service administered lands. These wells provide water when Eagle Creek levels fall to supply the needs of the downstream Morenci Mine operation. Water from these wells is pumped into Eagle Creek to increase surface flow. Eagle Creek is used to transport water to the Morenci Mine from the Black River pumping station along with well fields in the Eagle Creek drainage. Pipelines and discharge facilities lie on rights-of-way under Forest Service permits within the land corridor.

Other primary downstream uses include agriculture around the city of Safford and domestic uses.

CERTIFICATE OF
WATER RIGHT #

<u>CERTIFICATE OF WATER RIGHT #</u>	<u>OWNER</u>	<u>STREAM</u>	<u>LEGAL LOCATION</u>	<u>ACRE FEET</u>
CWR 266	USFS	EAGLE CREEK	1S 28E SEC 17	45 AC/FT
CWR 344	METCALF	EAGLE CREEK	1N 28E SEC 7	4 AC/FT/AC
CWR 540	MOORE*	EAGLE CREEK	1S 28E SEC 29	
CWR 322	DOUBLE CIRCLE	EAGLE CREEK	1S R28E SEC 17	
CWR 516	BISHOP*	EAGLE CREEK	1S 28E SEC 17	
CWR 547	TRAINOR	EAGLE CREEK	1N 28E SEC 6&7	
CWR 542	PETERS	EAGLE CREEK	1S R28E SEC 5&8	
CWR 537	JOHNSON	EAGLE CREEK	1S 28E SEC 5&7	
CWR 534	HICKS	EAGLE CREEK	1S 28E SEC 8&17	
CWR 531	BAGAN	EAGLE CREEK	1S 28E SEC 7	
CWR 523	DEMOS	EAGLE CREEK	1N 28E SEC 19, 30, 31	
CWR 526	FILIPMAN	EAGLE CREEK	1S 28E SEC 18	
CWR 527	FILIPMAN	EAGLE CREEK	1S 28E SEC 19 & 30	

Transportation Facilities - Eagle Creek's main access is on Eagle Creek County Road. This road is 22.6 miles long and travels across Forest Service and private land then ending at Honeymoon Campground. Eagle Creek County Road is an unsurfaced, developed road open year round.

There are several trails that lead to Eagle Creek from U.S. Hwy 191 (666): Dry Prong Trail #45, Squirrel Trail #34, Warren Canyon #48, McBride Mesa Trail #26, East Eagle Trail #33, Robinson Mesa Trail #27, Hot Air Trail #9, Mud Springs Trail #49, and Eagle National Recreation Trail #46.

Recreational Activities - There are a variety of recreational developments and activities that occur along various portions of the creek including hunting, equestrian travel, fishing, hiking, and camping. Wildlife viewing, particularly birdwatching, is a prominent use. Honeymoon Campground has a capacity of 20 PAOT (people at one time). The Eagle Creek area is now known nation wide due to a recent article in ARIZONA HIGHWAYS MAGAZINE. Recreational use level is moderate along the study area south of Honeymoon Campground and low north of the campground.

Current Special Management Designation - The Honeymoon Campground is the only management area that is in current use.

Mining - The Bureau of Land Management mining claim printout dated February, 1993, shows 80 mining claims along this corridor.

Special Land Uses - There are several facilities that are in the creek corridor and are located as follows:

- T1S R28E Sec 8 - James and Clarice Holder - Water transmission ditch
- T1S R28E Sec 30 - Walter Westmoreland - Irrigation ditch
- T1S R28E Sec 31 - Walter Westmoreland - Irrigation ditch
- T1S R28E Sec 31 - Phelps Dodge - Water transmission pipe
- T1S R28E Sec 31 - Eagle Creek School District - School
- T1S R28E Sec 32 - Old gauging station (not in use)

Livestock Grazing and Agriculture - This segment of Eagle Creek borders the following six Forest Service Grazing Allotments: East Eagle, Mud Springs, Baseline, Horse Springs, Double Circles. There are numerous fences, corrals, cattleguards, and other range improvements located within the stream corridor. The Forest Service has an administrative horse pasture at the site of the historic Eagle Creek Ranger Station. In addition there are several private residences and associated out buildings which border Eagle Creek.

East Eagle Allotment encompasses about 10 miles of the upper reaches of Eagle Creek (upper segment). Current use of most of this stretch of Eagle Creek is grazed with about 140 cattle seasonally from 3-7 months. A 1 mile stretch at the headquarters to below Honeymoon campground is not grazed by livestock.

Mud Springs Allotment encompasses about 6 miles of Eagle Creek, but includes several private land inholdings and associated traps. Most of these are ungrazed by livestock at this time since the allotment is destocked. Primary use occurs in the winter months.

Baseline/Horse Springs Allotment encompasses about 2 miles of Eagle Creek, including several parcels of private inholdings, most of which have livestock grazing year-round. Those portions of Forest land included in the allotment are fenced and used only during winter months, by a few yearling cattle.

Double Circles Allotment encompasses about 6 miles of stream, including several private land parcels. With exception of private land, lands along the creek have livestock grazing seasonally in summer and early fall, with about 250-300 cattle.

There are several irrigated pastures which are under special use permit associated with the Grazing Permit for the Double Circle Ranches north of the Phelps Dodge Pump Station.

Timber Harvest - There are several hundred acres of timber on the Eagle Creek Watershed, but at present there are no plans to harvest timber commercially. The upland area along Eagle Creek is considered suitable for fuelwood harvest depending upon terrain and accessibility. Primary fuelwood species include Pinon pine and Alligator Juniper.

SOCIAL AND ECONOMIC VALUES

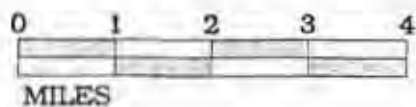
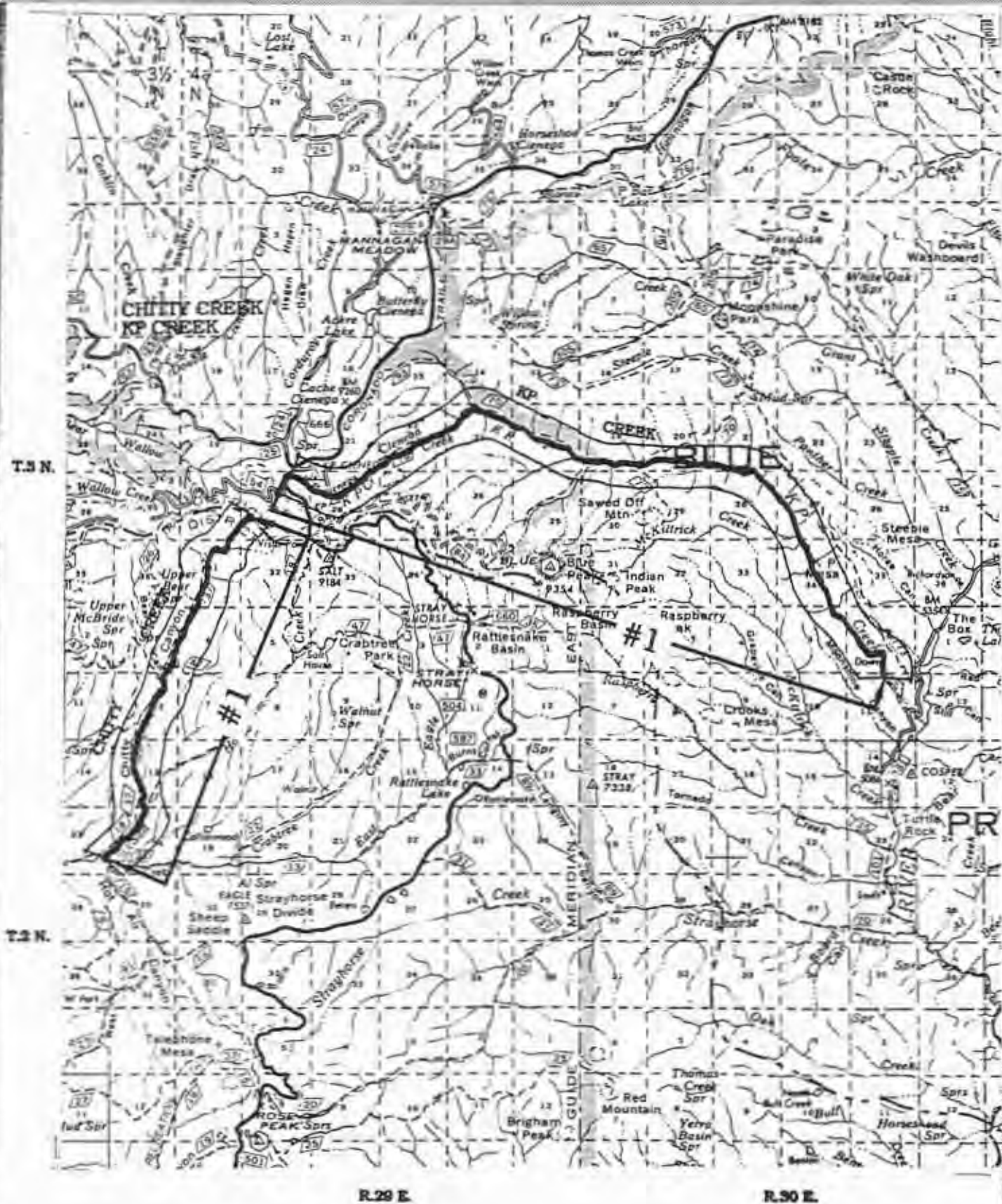
The local users are from the communities of Safford, Duncan, Clifton, and Morenci, Arizona. Users from Glenwood and Reserve, New Mexico, also frequent the area. Other users include individuals from Tucson and Phoenix. The Eagle Creek area is now known nationally because of a recent article covering it in ARIZONA HIGHWAYS MAGAZINE.

REFERENCES

Geology - Arizona Materials Inventory of Greenlee County. Arizona Highways Department. Materials Division, May 1966.

KP CREEK

KP CREEK



KP CREEK

LOCATION

Name: KP Creek County: Greenlee Forest: Apache-Sitgreaves

KP Creek originates near the Mogollon Rim and near U.S. Highway 191. From its origin, it flows easterly for approximately 13 miles to the Blue River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 12 miles of KP Creek, from KP Cienega to the private property boundary, were evaluated for potential designation.

Eligible Segment: KP trailhead to private land - 12 miles.

Eligibility: KP Creek is freeflowing with no impoundment or diversion.

The outstandingly remarkable values include:
Entire Segment - Scenic

Classification: Entire Segment - Wild

Total stream corridor (1/4 mile on each side) includes 3840 acres, of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology: KP Creek is within the Colorado Plateau province, although more severely faulted and disturbed than the plateau to the north. All of the rocks that are exposed are either volcanic or epiclastic (sedimentary rocks composed of volcanic debris) origin. Rocks of upper KP Creek are basalt or andesite of Quaternary-Tertiary age. These gradually give way to epiclastic volcanic sediments ranging from lahatic (or mudflow type) breccia (rocks of small angular rock fragments cemented together) to volcanic conglomerate, sandstone and siltstone. The slopes above KP Creek near its confluence with the Blue River have exposed tertiary-aged rhyolite ash-flow tuff overlain by buff to gray colored, gently tilted beds of conglomerate (Gila conglomerate Formation).

Streamflow and Water Quality: Water quality data from EPA STORET indicates that KP Creek does meet standards set by Arizona for cold water fisheries, full body contact, domestic water supply, fish consumption, and agricultural watering. No stream flow data is available but the average flow is estimated to be about 4cfs.

Vegetation: This steep-walled canyon exhibits vegetation associated with slope and aspect typical of the area. On north-facing slopes, the vegetation consists of tree species such as spruce, Douglas fir, and ponderosa pine. On the south-facing slopes, shrub species and small trees account for most of the composition (i.e. oak, manzanita, pinyon, juniper). Riparian vegetation includes alder, willow, and associated trees such as boxelder and sycamore. T and E species that may occur in this canyon include Goodding onion, Standley Whitlow-grass, Mogollon fleabane, Gila groundsel, and Mogollon clover.

Fisheries and Wildlife: Fish species in KP Creek include rainbow and native (possibly Apache) trout, desert sucker, speckled dace, and perhaps the loach minnow. No stream surveys have been made on this stream. Wildlife species include: black bear, turkey, mountain lion, bobcat, mule deer, Merriam's elk, blue grouse, Abert's squirrel, long-tailed weasel, bald eagle, Mexican spotted owl, peregrine falcon, and coyote. Suitable habitat exists for the following T and E species: spotted bat, occult little brown bat, New Mexican jumping mouse, northern goshawk, sharp-shinned hawk, zone-tailed hawk, common black hawk, veery, belted kingfisher, gray catbird, southwestern willow flycatcher, Mexican and narrowheaded garter snakes, Arizona southwestern toad, the Chiricauha, Northern, and lowland frogs, California floater, and White Mountain water penny beetle.

Visual Resources: KP Creek and the canyon it flows through exhibit outstandingly remarkable scenery with its lush vegetation and steep canyon walls.

Cultural and Historical Resources: No known cultural or historic resources exist in this segment of KP Creek.

Air Quality: KP Creek is in a Class II air quality area (i.e. Blue Range Primitive Area) and has high quality air.

LAND USES AND DEVELOPMENTS

Land Ownership: The river is located on National Forest lands in the Apache-Sitgreaves National Forests.

River Corridor Acreage : 3840 acres

Water Rights and Water Resource Developments: There are no dams or dikes on this segment and there are no plans to develop such. Downstream water users include various Indian tribes and agricultural interests.

Transportation Facilities: This stream is accessible by vehicle only at its origin at KP Cienega. The remainder of the stream is either inaccessible or accessible only by foot or horseback. Trail # 70 parallels the creek for about 5 miles.

Recreation Activities: Fishing, hiking, and backpacking are the most popular activities within this canyon. There is a popular day-hike destination point about 3 1/2 miles from KP Cienega where 2 waterfalls are adjacent to the trail. This canyon also provides an access point to the Blue Range Primitive Area.

Current Special Management Designations: This stream is within the Blue Range Primitive Area which is managed as wilderness. This creek also has been identified as a possible stream for renovation to an Apache trout stream under the Apache Trout Recovery Plan.

Mining: No mining claims exist in this canyon and no evidence of past mining activities exists. Even though this area is managed as wilderness, mining claims are still legitimate here.

Special Land Uses: There are no special use facilities in this segment. The canyon is used by outfitters and guides under permit for hunting activities.

Livestock Grazing and Agriculture: This segment is in one grazing allotment: the KP Allotment authorizes 225 animals. A fence crosses the stream about midway through the segment and again at the bottom end of the segment.

Timber Harvest: No timber has ever been harvested in this canyon although fire suppression and trail maintenance activities have claimed some trees.

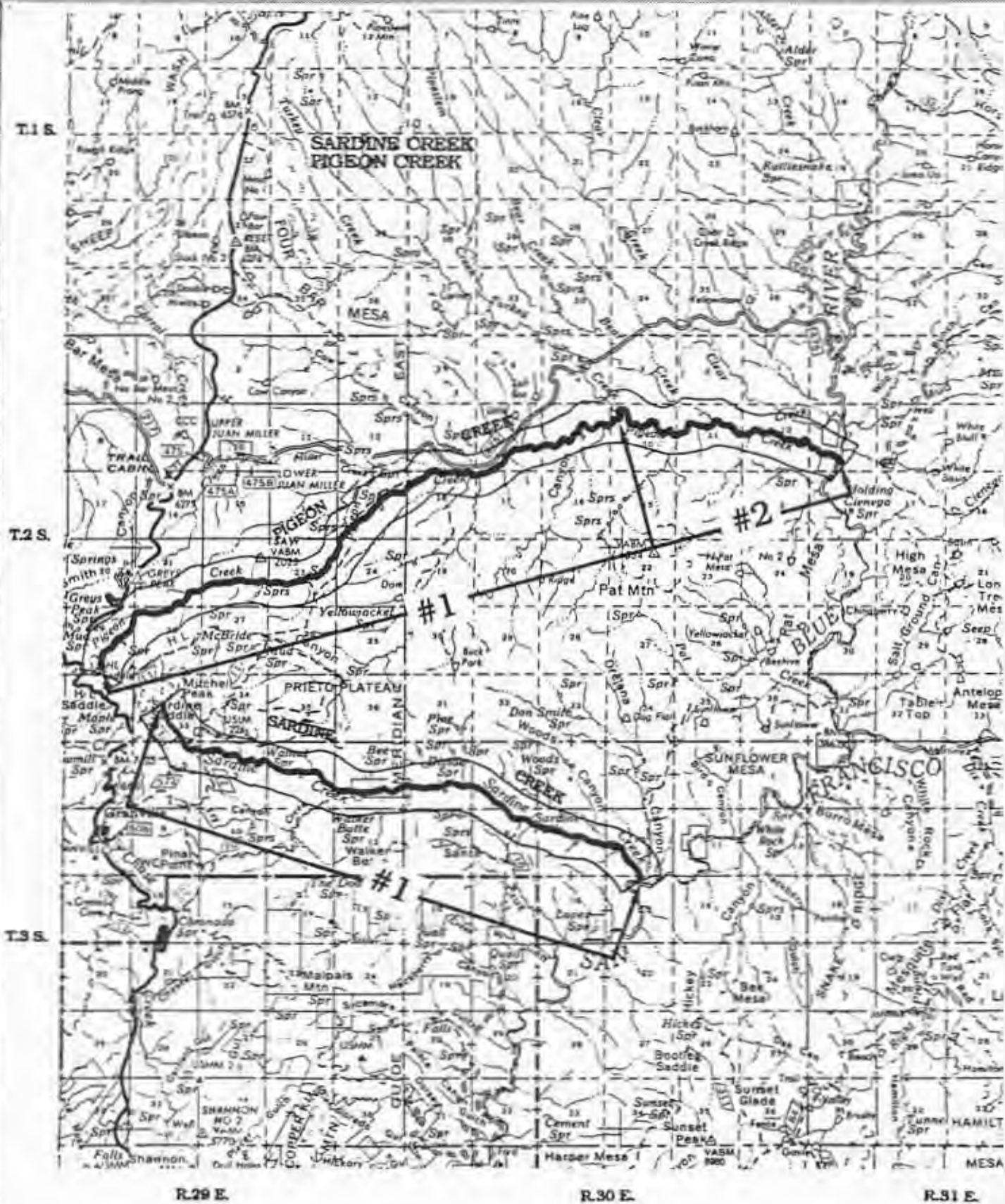
Other Activities: None

SOCIAL AND ECONOMIC VALUES

Most visitors to KP Creek come from the metropolitan areas of Phoenix and Tucson. Use is estimated at about 1500 recreation visitor days annually.

PIGEON CREEK

PIGEON CREEK



PIGEON CREEK

LOCATION

Pigeon Creek - Greenlee County, Apache-Sitgreaves National Forests

Pigeon Creek - This creek originates near Hwy 191 and flows northeasterly for approximately 16.0 miles, to the confluence with the Blue River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 16.0 miles of Pigeon Creek, from the headwaters to the confluence with the Blue River, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 - 12.5 miles
- Headwaters to Turkey Creek
- Segment 2 - 3.5 miles
- Turkey Creek to confluence with the Blue River

Eligibility:

Segment 1 is freeflowing and without impoundments or diversions

Segment 2 is freeflowing and without impoundments or diversions

The outstandingly remarkable values include:

- Segment 1 - Cultural
- Segment 2 - Cultural

The headwaters of the creek originate near Hwy 191 (666) at H L Saddle. It then flows east to form a riparian habitat in a steep canyon.

Classification:

- Segment 1 - Recreational
- Segment 2 - Wild

The total river corridor (1/4 mile on each side) includes 5,120 acres, of which the Forest Service administers approximately 98 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Most of the study area consists of fossiliferous alluvial and lacustrine deposits of middle or early Pliocene age within valleys of the present drainage system and correlative conglomerate, sand, silt, and clay.

The far west portion consists of basic igneous rocks that occur as irregular shaped lava flows. These rocks consist essentially of dark-colored, fine-grained, vesicular basalt and andesite with local interbeds of sedimentary materials and tuff. The older volcanic rocks consist of both basalt and andesite, which are extensively eroded and the rock layers may be inclined at varying angles due to block faulting and tilting. Locally, the surfaces of the basic lava rocks may be decomposed into a sticky, plastic clay.

Streamflow and Water Quality - Perennial surface water in Pigeon Creek starts at the point where the creek bed runs closest to Juan Miller County Road. Surface water becomes ephemeral below the first falls until you reach the second bedrock falls. Perennial surface flow resumes below the second falls. The creek again becomes ephemeral on the lower end of Pigeon Creek creating a effective barrier between Pigeon and the Blue River. Live water flow throughout the Pigeon Creek system lasts for a duration of approximately five months, depending on winter moisture and summer rains.

Vegetation - Overstory vegetation along Pigeon Creek is dominated by Arizona Sycamore, alder, ash, and Arizona Oak. Terrace vegetation along the creek consists mainly of sycamore, ash, Arizona Oak, with a domination of Alligator Juniper.

Major cover types within the watershed area are ponderosa pine, pinyon-juniper woodland, and chaparral. The ponderosa pine type occurs on the north slopes at higher elevations along the southwestern boundary of the watershed. Composition within this type is dominated by ponderosa pine, pinyon pine, and alligator juniper in the overstory. Understory vegetation is composed of bottlebrush squirreltail, sideoats grama, Arizona cottontop, agave, scrub oak, mountain mahogany, Wright's silktassel, and gamble's oak. Chaparral is found at higher elevations on the south facing slopes. Major species occurring in the area are mountain mahogany, ceanothus, Wright's silktassel, and scrub oak. At lower elevations within the watershed, pinyon pine, and juniper co-dominate to form the woodland vegetation type. South slopes within the woodland type are characterized by pinyon pine, Alligator juniper, oak, a variety of shrubs, side oak grama, curly mesquite, hairy grama, bull grass, and blue grama.

Fisheries and Wildlife - Fish species encountered during a 1990 survey include speckled dace, longfin dace, desert sucker, Sonora sucker, and all natives.

The Pigeon Creek area and surrounding uplands support mule deer, white tailed deer, turkey, javelina, bear, coyote, meadows quail, and lion.

Threatened and Endangered Species that may occur in the Pigeon Creek drainage and adjacent areas due to marginal to suitable habitat include the Spotted bat, Sanborn's long-nosed bat, Oncilla, little brown bat, Arizona southwestern toad, Ferruginous hawk, and Common Black hawk.

Visual Resources - The creek passes through a diversity of textures, colors, and forms represented in the canyon's trees, shrubs, stream side vegetation. Steep and rough canyons, bad land looking areas, and orange and red sandstone walls are only three of the different landscapes the creek passes through.

Cultural and Historical Resources - Segment 1 - Headwaters to Turkey Creek - Several prehistoric sites associated with the Mogollon Culture have been recorded in this area just east of where Cow Canyon intersects Pigeon Creek. Sites include artifact scatters, one-room rock and cobble fieldhouses, rock alignments, small room blocks, and pictograph and petroglyph panels. Three sites are located along the top of the cliffs overlooking the creek. Two rock art sites are located within the canyon on the rock faces adjacent to the creek. Certain aspects of the pictograph panel suggest a protohistoric association (Apache?). The petroglyph site reflects Mogollon elements. Much of this segment of Pigeon Creek has not been inventoried. Additional sites are certain.

No historic sites have been recorded along this segment of Pigeon Creek. Additional survey is needed to identify and document any historic period activities.

Segment 2 - Turkey Creek to the confluence with the Blue River - This segment of Pigeon Creek has not been inventoried for heritage resources. Mogollon sites have been recorded in portions of Segment 1, including artifact scatters, small habitation sites, and rock art panels. It is highly probable that future archeological inventories will record the location of additional sites along this segment of the creek.

No historic period sites are known along the creek itself. However, near the point where the creek meets the Blue River, evidence of early homesteading and/or ranching activities may be present.

Air Quality - The area is not monitored by the state for pollutants. It is in a Class II Air Quality category which includes all areas other than Class I. Class I areas are specified national parks, wilderness areas, and certain Indian reservations.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located on the Apache-Sitgreaves National Forests. There is one private parcel. The river corridor: Segment 1 is 12.5 miles long and 4000 acres, Segment 2 is 3.5 miles long and 1120 acres. There are 67.5 acres of private land in segment 1. These acres are located in T2S R29E Section 13.

Water Rights and Water Resource Developments - There are no Certificates of Water Rights on Pigeon Creek. Primary withdrawals of water within the Pigeon Creek watershed are for livestock purposes. Water developments in the forms of developed springs and tanks have been constructed within the watershed area.

The Pigeon Creek watershed is a tributary of the Blue River. Water produced on the watershed is used by the City of Clifton, which receives water from the San Francisco River, and by downstream users around Safford, Arizona, for agricultural purposes.

Transportation Facilities - Segment 1 - Vehicle access is by Juan Miller County Road which runs close to the creek for approximately three miles. It is an unsurfaced, developed road open year round, which passes Upper and Lower Juan Miller Campgrounds and runs through a small section of private land. Trail access is from HL Saddle Trail #11.

Segment 2 - This segment of Pigeon Creek has no vehicle or trail access.

Recreational Activities - Segment 1 - There are recreational activities that occur along this segment including hunting, hiking, and equestrian travel.

Segment 2 - The primary recreational activity along this segment would be hunting. Recreational use along both segments is low.

Current Special Management Designations - Neither segment 1 or segment 2 have any current special management designation or planned management designations.

Mining - The Bureau of Land Management mining claim printout dated February, 1993, does not show any active mining claims along this corridor.

Special Land Uses - T2S R29E Section 13 - T Links Ranch - Road permit.

Livestock Grazing and Agriculture - Pigeon Creek is encompassed by the Pigeon (12.5 miles) and NO Bar unit of the Double Circles Allotment (3.5 miles). The creek crosses one allotment boundary fence and four pasture fences, the Pigeon, HL, Chitty, and Wells pastures on the Pigeon Allotment. There are several cross fences, and corrals located within the creek corridor. The Pigeon ranch headquarters, known as the T-Links, is located 1/2 mile from Pigeon Creek, along Turkey Creek, on the Juan Miller Road.

Livestock grazing along Pigeon Creek, on Pigeon Allotment, is seasonal and yearlong, depending on pasture and grazing program for the year. Livestock grazing on Double Circles allotment is winter use by heifers and bulls at the present time.

Timber Harvest - Timber within the ponderosa pine type is of small sawlog sizes. No harvest activities are proposed or pending at the present time. Upland areas within the watershed are considered suitable for fuelwood harvest, depending on accessibility. Primary fuelwood species include Pinyon pine and Alligator Juniper.

SOCIAL AND ECONOMIC VALUES

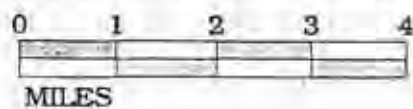
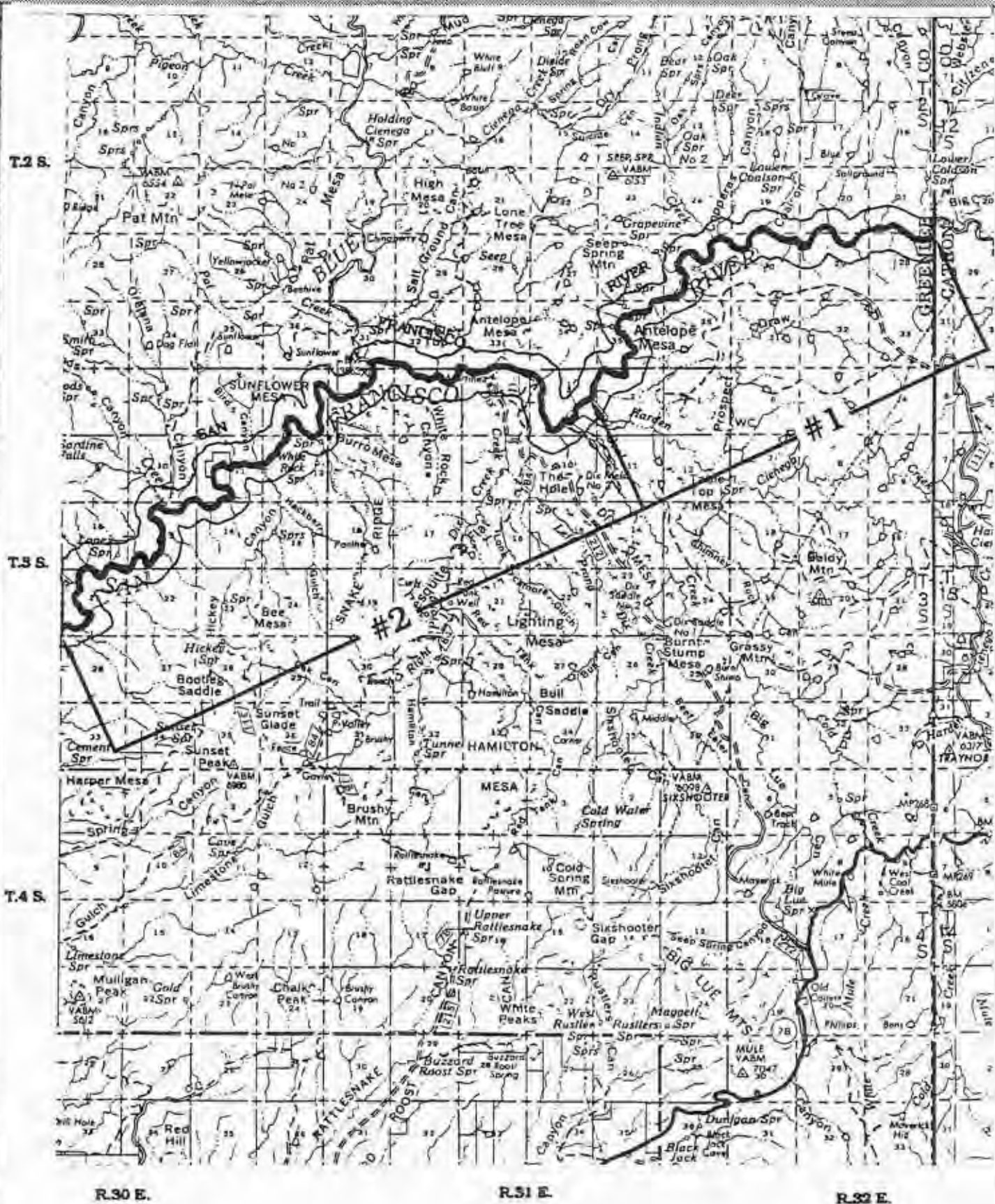
The local users are from the communities of Safford, Duncan, Clifton, and Morenci, Arizona. Users from Glenwood and Reserve, New Mexico, also frequent the area. Other users include individuals from urban centers such as Tucson, Phoenix, and Albuquerque.

REFERENCES

Geology - Arizona Materials Inventory of Greenlee County, Arizona Highways Department, Materials Division, May 1966.

SAN FRANCISCO RIVER

SAN FRANCISCO RIVER



SAN FRANCISCO RIVER

LOCATION

San Francisco River - Greenlee County, Apache-Sitgreaves National Forests.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

A. Segment found Potentially Eligible for Designation:

Approximately 22 miles of the San Francisco River, from the Arizona/New Mexico state line to the National Forest boundary, were evaluated for potential designation as a Wild and Scenic River.

(Note: In 1981 the San Francisco River was considered eligible and was studied for inclusion into the Wild and Scenic River system. It was recommended not to be designated.)

Eligible Segments:

- Segment 1
- 9 miles
- From the Arizona / New Mexico state line to Harden Cienega.
- Segment 2
- 13 miles
- From Harden Cienega to the National Forest boundary.

B. Eligibility:

Segment 1 is freeflowing and without significant impoundments or diversions.

Segment 2 is freeflowing and without significant impoundments or diversions. There is one operational diversion pump and diversion structure that spans the river, located just above private lands in the NW 1/4 Section 3, T. 3 S., R. 31 E.

The outstandingly remarkable values include:

Segment 1 -- Scenic, Recreational, Fish and Wildlife, and Riparian.

Segment 2 -- Recreational, Fish, and Wildlife.

C. Classification:

Segment 1 -- Wild

Segment 2 -- Recreational

The total river corridor (1/4 mile on each side) includes 7,040 acres, of which the Forest Service administers approximately 96 percent.

DESCRIPTION OF RESOURCES AND VALUES

A. Geology - About 2/3 of the east portion of the study area consists of basic igneous rocks that occur as irregular shaped lava flows. These rocks consist essentially of dark-colored, fine-grained, vesicular basalt and andesite with local interbeds of sedimentary materials and tuff. The older volcanic rocks consist of both basalt and andesite, which are extensively eroded and the rock layers may be inclined at varying angles due to block faulting and tilting. Locally, the surfaces of the basic lava rocks may be decomposed into a sticky, plastic clay.

The west portion is Tertiary and Cretaceous Age, acid volcanic rocks, that occur as irregularly shaped flows. The flows consist principally of light colored andesites which locally include stratas of tuff and agglomerate. These are intensely eroded, faulted, and broken.

B. Streamflow and Water Quality - The 22 mile stretch of river from the Arizona/New Mexico State Line to the National Forest Boundary drops an average elevation of 4,212 feet from the state line. The river bottom is 200-500 + feet wide and at flood stages, water stretches across the entire expanse up to 20 feet deep. During normal flows, the river channel meanders with some braiding through the canyon bottom. The average depths are 8-20 inches, with the width varying from 30-100 feet. The median flow above the confluence is 70 cfs (cubic feet per second).

C. Vegetation - The river communities consist of riparian broadleaf woodland, riparian scrub, desert scrub, pinyon juniper scrub, and oak woodland. Where deeper deposits exist, the canyon floor is occupied by mesquite, woody shrubs, and herbs with widely scattered tree species such as cottonwood, Goodding willow, Arizona Sycamore, hackberry, alder, and weepwillow. Along the channel edges, riparian vegetation consists of boxelder, weepwillow, alder, sycamore, hackberry, cottonwood, willow, grasses, forbs, and shrubs.

Landscape beyond - Immediately upon leaving the canyon floor, arid low shrubs and grasses dominate the landscape. Prickly pear cactus, creosote bush, catclaw acacia, and spanish-dagger accent the predominantly grass landscape. The upland mesa consists primarily of grama grass range with small inclusions of brush such as Blackjack Oak, and scrub oak on side hills and canyon bottoms. Pinyon/Juniper woodland occurs on north facing slopes and higher elevations.

D. Fish and Wildlife - Sport fishing along the San Francisco River is classified as fair. Species include catfish, sunfish, and bass, although only catfish provide good fishing. Several species of minnows and suckers are also found.

Wildlife species such as mountain lion, mule deer, white tail deer, javelina, bear, and bighorn sheep occur within the river area. Bird species include quail, the common merganser, mallard duck, turkey, bandtailed pigeon, and dove.

TES SPECIES: Mexican Black Hawk (*Buteogallus anthracinus*) nests within the steep slopes. Bald Eagles (*Haliaeetus leucocephalus*) use the area extensively during the winter months. The San Francisco river is proposed for designation as critical habitat for the Loach Minnow and the Spikedace. In addition, other Threatened and Endangered Species which may occur in the San Francisco River drainage, due to the presence of marginal to suitable habitat, include the Greater western mastiff bat, Spotted bat, California leaf-nosed bat, Occult little brown bat, Silky pocket mouse, Mexican garter snake, Narrow-headed garter snake, Arizona southwestern toad, Chiricahua, Northern, and Lowland leopard frogs, Zone-tailed hawk, Ferruginous hawk, and the peregrine falcon.

E. Visual Resources - The San Francisco has a variety of landscapes providing a diversity of textures, colors, and forms created by the river's stream side vegetation and geological formations.

F. Cultural and Historical Resources - Segment 1: The San Francisco River is located within the vast area once occupied by the prehistoric Mogollon culture. This river valley is one of several in the semi-arid southwest which provided locations with optimal conditions for agricultural pursuits. However, much of this segment of the San Francisco runs through a narrow steep-sided canyon. Access to the river from the canyon rim is difficult. Survey of the river corridor east from the Martinez Ranch to the Arizona/New Mexico state line located a few sites along the river itself. Typical sites include rock shelters and rock art panels. Sites are expected along the canyon rim which has not been inventoried.

Historic activity along the San Francisco River includes early cattle ranching, homesteading, and mining, primarily along the western portion of this segment. To the east, the river corridor narrows and is bordered by steep, rugged cliffs.

Segment 2: Archeological sample survey has recorded the presence of several prehistoric Mogollon sites along the cliffs bordering this segment of the river. It is certain that complete inventory would identify numerous others. The San Francisco river valley is one of several in this semi-arid region which provided optimal conditions and locations for agricultural pursuits. Several access routes to the river are present. It is along such river valleys that the largest population densities occurred. Site types include lithic scatters (some possibly dating to the Archaic period), rock shelters, rock art panels, pithouse villages, small masonry roomblocks, and multi-roomed pueblos. These sites represent long term prehistoric occupation and utilization of the San Francisco River corridor and surrounding area. All sites except a few possibly Archaic lithic scatters are associated with the Mogollon Culture.

Historic period sites are known to be present along the river corridor, but no formal recording has been conducted to date. Sites would include evidence of early cattle ranching, homesteading, and mining.

G. Air Quality - The area is not monitored by the state for pollutants. It is in a Class II Air Quality category which includes all areas other than Class I. Class I areas are specified national parks, wilderness areas, and certain Indian reservations.

LAND USES AND DEVELOPMENTS

A. Land Ownership - The river is located on the Apache-Sitgreaves National Forests. There are four private parcels. The river corridor: Segment 1 is 9 miles and 2880 acres, Segment 2 is 13 miles and 4160 acres. There is no private land in Segment 1. There are 270 acres of private land in Segment 2. These are located in:

T3S, R30E, Section 11 - 50 acres,
 Section 16 - 100 acres,
T3S, R31E, Section 3 - 45 acres,
 Section 4 - 45 acres,
 Section 33 - 25 acres,
T3S, R32E, Section 2 - 5 acres.

B. Water Rights and Water Resource Developments - There are two privately owned Certificates of Water Rights on the San Francisco River and one Forest Service owned Right. All of them are in Segment 2. The San Francisco River furnishes water both for the local Clifton area and also for irrigation and agricultural purposes in the Gila River Valley. Currently there are diversions for domestic, livestock, municipal, irrigation, and mining purposes along the San Francisco River. A diversion dam for irrigation purposes is located within the river channel just east of the Martinez Ranch in Segment 2. In addition, a diversion pump for agricultural uses is operated within the river channel in Segment 2.

CERTIFICATE OF WATER RIGHT #	OWNER	STREAM	LEGAL LOCATION	ACRE FEET
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CWR BB-524	USFS	SAN FRANCISCO	3S 31E SEC 3	48 AC/FT
CWR 521	CUNNINGHAM	SAN FRANCISCO	2S 31E SEC 33	
CWR 525	ELRAGE	SAN FRANCISCO	3S 30E SEC 11	

C. Transportation Facilities - Segment 1: Non-mechanized only. There are no other trails or roads in the area besides Forest Road 212 a couple miles west.

Segment 2: Vehicle access is Forest Road 212 which leads to the Martinez Ranch. About 2 1/2 miles above the Martinez Ranch is segment 1.

D. Recreation Activities - Segments 1 and 2 - The recreational activities that occur are water play, advanced canoeing seasonally, hunting and fishing. Recreational use along segment 2 is low to moderate. Use along segment 1 is low.

E. Special Management Designations - The river is closed to vehicle use from where Forest Service Road meets the river at the Martinez Ranch to the Arizona/New Mexico State line.

F. Mining - The Bureau of Land Management mining claim printout dated February, 1993, does not show any active mining claims along this corridor.

G. Special Land Uses - Two types of gauges are in Segment 2 and are located as follows:

Segment 2:
T3S R30E Sec 1 - Arizona Department of Water Resources - Rain gauge
T3S R30E Sec 1 - Arizona Department of Water Resources - Stream gauge

Segment 1 does not have any special land uses.

H. Livestock Grazing and Agriculture - The San Francisco River forms the boundary of seven range allotments between the Forest Service boundary near Clifton and the New Mexico State Line. Six of these Allotments (Sardine, Hickey, Pleasant Valley, Pigeon, Wildbunch, and Copperas) are administered by the Clifton Ranger District of the Apache-Sitgreaves National Forests. One allotment, Harden Cienega, is administered by the Glenwood Ranger District of the Gila National Forest.

The Copperas Allotment borders about 4.5 miles of segment 1, but cattle do not have access to the river.

The Harden Cienega Allotment, administered by the Glenwood Ranger District, Gila National Forest, borders the adjacent south bank of the river for about 9 miles in segment 1. The actual season of use on the river is unknown, but the total Term Grazing Permit is for 596 cattle yearlong, and 538 cattle (yearlings) on a seasonal basis.

The Wildbunch Allotment borders the river north of Harden Cienega and Pleasant Valley Allotments for about 8.75 miles, about 1/2 in each segment. Cattle currently have no access to the river, and stocking rate is being reduced on the allotment by about 60-70% in 1993.

Pigeon Allotment borders the river from the confluence of the Blue River south in segment 2 for about 2.75 miles. Cattle have no access to the river.

Hickey Allotment encompasses the remainder of segment 2 of the river for about 8.5 miles. Cattle have access to the river seasonally with about 100 cattle. During 1993, 30% of the Term Grazing Permit numbers was suspended.

One parcel of private land which lies within the San Francisco River corridor has a house, bunkhouse, outbuildings, corral, etc. A second parcel also contains a variety of improvements such as a house, bunkhouse, outbuildings, corrals, irrigated pastures, etc. In addition there is a 40 acre parcel under federal ownership which contains a cabin, fields, and is cross fenced. Other range improvements which occur within the river corridor include allotment boundary and ranger district boundary cross fences at the state line, district boundary north of Clifton, allotment boundary and the Blue River confluence, and several miles of boundary fences that occur within the river corridor.

I. Timber Harvest - There are no areas within the watershed suitable for timber harvest. A limited number of acres within the watershed are suitable for fuelwood harvest, depending on terrain and accessibility. Primary fuelwood species include Pinyon pine and Juniper.

SOCIAL AND ECONOMIC VALUES

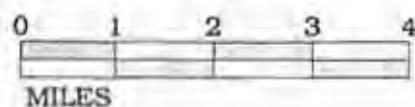
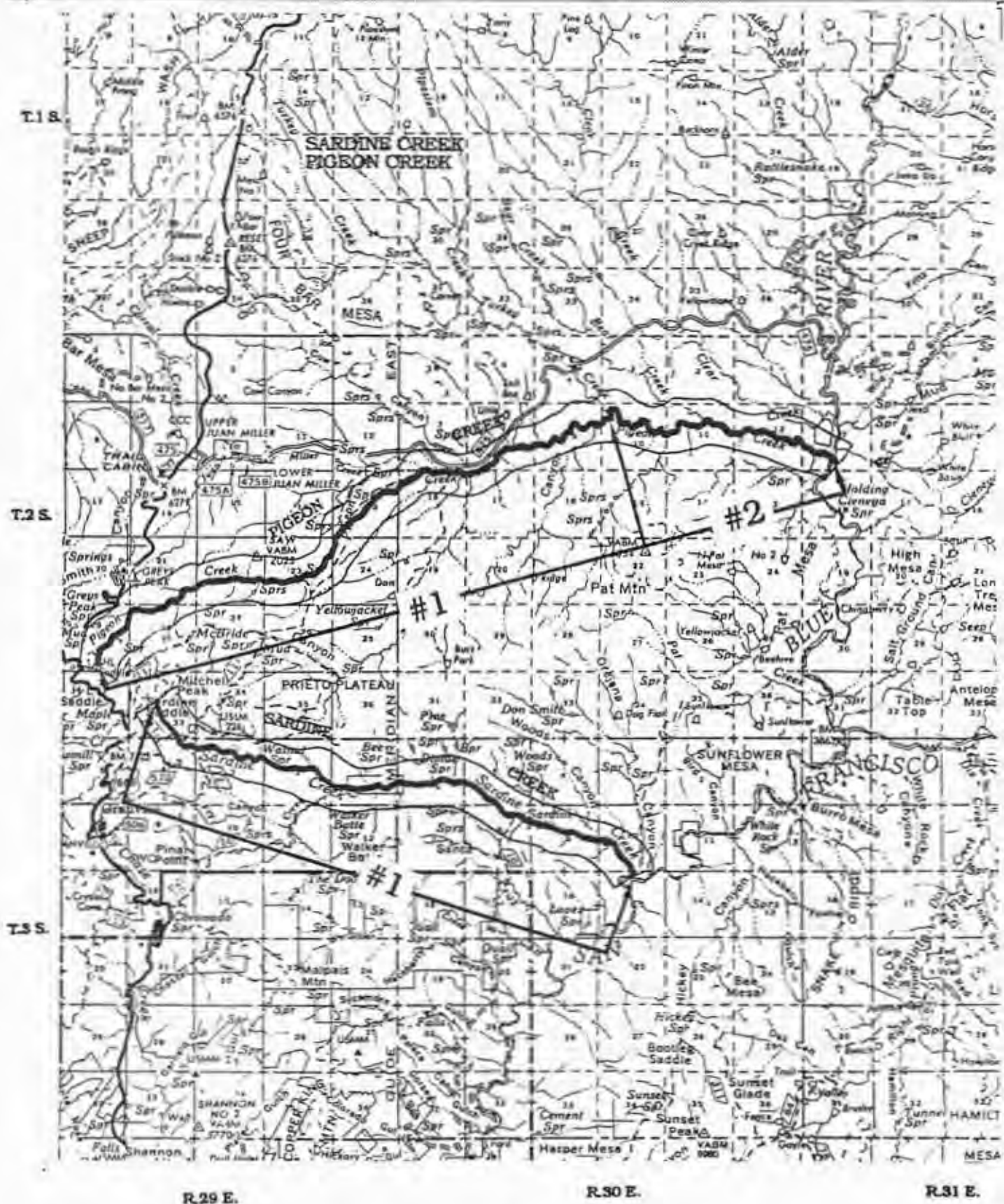
The local users are from the communities of Safford, Duncan, Clifton, and Morenci, Arizona. Users from Glenwood and Reserve, New Mexico, also frequent the area. Other users include individuals from urban centers such as Tucson and Phoenix.

REFERENCES

Geology - Arizona Materials Inventory of Greenlee County, Arizona Highways Department, Materials Division, May 1966.

SARDINE CREEK

SARDINE CREEK



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SARDINE CREEK

LOCATION

Sardine Creek, Greenlee County, Apache-Sitgreaves National Forests.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 9.0 miles of Sardine Creek, from the headwaters to the San Francisco River, were evaluated for potential designation as a Wild and Scenic River.

Eligible segments - 9.0 miles
- From the headwaters to the San Francisco River

Eligibility:

Sardine Creek is freeflowing and without impoundments or diversions

The outstandingly remarkable values include:

Sardine Creek - Scenic

The headwaters of the creek start near Hwy 191 (666) at Sardine Saddle. The creek flows down Sardine Canyon past Sardine Falls, a 15 foot waterfall, to join the San Francisco River.

Classification

Sardine Creek - Scenic

The total river corridor (1/4 on each side) includes 2880 acres, of which the Forest Service administers approximately 95 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - About the west 2/3 of the study area consists of basic igneous rocks that occur as irregular shaped lava flows. These rocks consist essentially of dark-colored, fine-grained, vesicular basalt and andesite with local interbeds of sedimentary materials and tuff. The older volcanic rocks consist of both basalt and andesite, which are extensively eroded and the rock layers may be inclined at varying angles due to block faulting and tilting. Locally, the surfaces of the basic lava rocks may be decomposed into a sticky, plastic clay.

Most of the east 1/3 is Tertiary and Cretaceous Age, acid volcanic rocks, that occur as irregularly shaped flows. The flows consist principally of light colored andesites which locally include stratas of tuff and agglomerate. These are intensely eroded, faulted, and broken.

The far west portion consists of preCambrian schist.

Streamflow and Water Quality - The only area of Sardine Creek which is perennial is Sardine Falls and the adjacent downstream area. The rest of the creek is ephemeral. Length of flow within the ephemeral reaches ranges from three to five months depending on winter moisture and summer rains.

Vegetation - Channel vegetation below the falls is dominated by sycamore, alder, seep willow, cottonwood, Gooding's willow, burrow bush, and desert broom. Terrace vegetation along the channel consists of netleaf hackberry, mesquite, and desert broom. Channel vegetation above the falls is dominated by cottonwood, and netleaf hackberry. Terrace overstory consists of sycamore, alder, mesquite, and juniper. Within the Granville Allotment on the upper reaches of Sardine Creek vegetation is dominated by alder, especially in the channel. Boxelder, cottonwood, sycamore, and walnut are also included in the overstory. Arizona grape, squawbush, and scarlet sumac are the primary shrub species.

The upland areas around Sardine Creek consist of Pinyon pine and juniper along with some ponderosa pine in higher elevations. The lower country is semi-desert grassland with curly mesquite, side-oats grama, blue grama, and three awn grasses. The lower elevations also support mesquite, catclaw, yucca, prickly pear, cholla, and agave.

Fisheries and Wildlife - Longfin dace and speckled dace occur below the falls in reaches with perennial water. No fish have been found above the falls.

Wildlife populations include white tail deer, javelina, mule deer, bighorn sheep, turkey, meadow quail, gambels quail, coyote, bear, and lion.

Threatened and Endangered Species which may occur in or near the Sardine Creek drainage, due to the presence of marginal to suitable habitat, include Sanborn's long nosed bat, Spotted bat, California leaf-nosed bat, Occult little brown bat, Arizona southwestern toad, Zone-tailed hawk, Common black hawk, Swainson's hawk, and the Ferruginous hawk.

Visual Resources - Sardine Falls is a very dramatic feature of Sardine Canyon. The falls have a total drop of about 20 feet, but falls in layers of the bedrock, with the highest drop about 15 feet.

Cultural and Historical Resources - This area lies within the territory formerly occupied by the prehistoric Mogollon Culture. However, little formal archeological inventory has been conducted along Sardine Creek. No prehistoric sites have been recorded to date. The importance of a perennial water source in an otherwise arid landscape argues well that Sardine Creek was important prehistorically. It is highly probable that future inventories will record evidence of Mogollon occupation such as shed and lithic scatters representing hunting and gathering camps, and possibly small habitation sites.

In the late 1800s and early 1900s, much of the surrounding area was the focus of mining activities. Scattered mine tailings, abandoned mine shafts and tunnels, trails, and occasionally the remains of old cabins and rock adobe structures are probable. One such site has been recorded near Sardine Falls. Evidence of early ranching activities may also be present. Again, little inventory has been conducted concerning heritage resource in the area. Future survey is certain to reveal additional sites.

Air Quality - The area is not monitored by the state for pollutants. It is in a Class II Air Quality category which includes all areas other than Class I. Class I areas are specified national parks, wilderness areas, and certain Indian reservations.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located on the Apache-Sitgreaves National Forests. There is one private parcel. The river corridor is 9.0 miles long and 2880 acres. There are 138 acres of private land along this creek. They are located in T3S, R29E, Section 1 - 125 acres, and T3S, R30E, Section 6 - 13 acres.

Water Rights and Water Resource Developments - There are no Certificates of Water Rights on Sardine Creek. No diversions exist within the creek corridor. There are several developed springs and stock tanks within the Sardine Watershed that have been constructed for livestock water. Sardine Creek drains into the San Francisco River above the town of Clifton. This water is used by the town for domestic purposes and also by the Phelps Dodge Corporation for mining purposes when needed.

Transportation Facilities - All of Sardine Creek is accessible from Sardine Canyon Trail #10. This trail is a total of 10.6 miles long. There is no other access to the creek area.

Recreational Activities - The recreational activities that occur along various portions of the creek include hunting, horse back riding, and hiking. Recreational use is low.

Current Special Management Designations - There are no current or planned special management designations along the creek corridor.

Mining - The Bureau of Land Management mining claim printout dated February, 1993, shows 10 mining claims in this corridor.

Special Land Uses - None

Livestock Grazing and Agriculture - Two grazing allotments occur within the river corridor, the Sardine Allotment and the Granville Allotment. There are a number of pasture division fences, allotment boundary fences, and corrals which occur within or across the corridor. Two private residences are located within the corridor.

The Granville Allotment encompasses about 3.5 miles of the headwaters of Sardine Creek, and is grazed yearlong with 70 cattle. Much of the actual drainage is inaccessible to livestock, except the canyon bottom.

Sardine Allotment encompasses 3.75 miles of Sardine Creek, including Sardine Falls. Although the allotment has a Term Grazing Permit of 56 cattle yearlong, an MOU with the permittee is in place for complete destocking until designated improvements are completed.

Timber Harvest - There are no areas within the watershed suitable for timber harvest. A limited number of acres within the watershed are suitable for fuelwood harvest, depending on terrain and accessibility. Primary fuelwood species include Pinyon pine and Juniper.

SOCIAL AND ECONOMIC VALUES

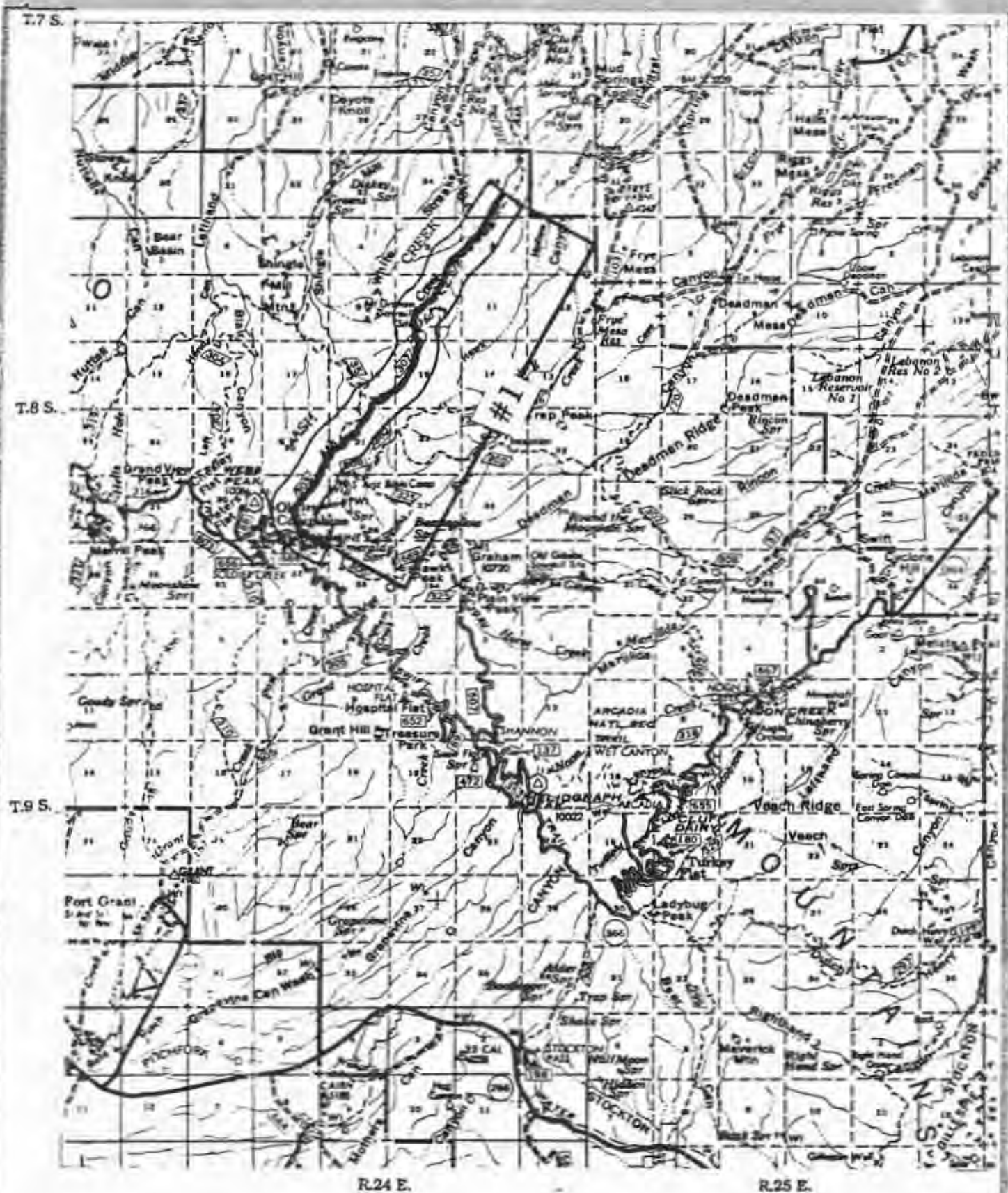
The local users are from the communities of Safford, Duncan, Clifton, and Morenci, Arizona. Users from Glenwood and Reserve, New Mexico, also frequent the area. Other users are from urban centers such as Tucson and Phoenix.

REFERENCES

Geology - Arizona Materials Inventory of Greenlee County, Arizona Highways Department, Materials Division, May 1966.

ASH CREEK

ASH CREEK



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MILES



ASH CREEK

LOCATION

Ash Creek, Graham County, Coronado National Forest.

Ash Creek originates high in the Pinaleno Mountains. The channel system flows in a Northeastly direction for approximately 14 miles, to the confluence with the Gila River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 7 miles of Ash Creek, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (only one segment) - Ash Creek
- 6.2 Miles
- from the headwaters to diversion for Cluff Ranch

Eligibility:

This segment of Ash Creek is freeflowing and without significant impoundments or diversions.

The outstandingly remarkable values include, but are not limited to:

Segment 1 - Ash Creek -- scenic, historic, and ecological.

The mixed broadleaf riparian area of Ash Creek is diverse in vegetation, dropping in elevation from Spruce-fir type to desert shrub type. The creek travels through small mountain meadows, forests of Engelmann spruce and Douglas-fir, thinleaf alder along the creek and makes its way through forests of oak, sycamore, box elder and Arizona Walnut. The upper section of this creek, between the elevations of 4700 feet to 9200 feet have been closed to cattle grazing. Steep slopes, deep canyons and waterfalls provide outstanding scenic qualities. Panoramic views of the Gila Valley may be seen from the mid to high elevations of the creek. Historic features such as remnants of an old sawmill operation provide artifactual evidence of early-anglo occupancy of Mt. Graham. Small native trout may be found hiding in pools along the creek. The Ash Creek Trail #307 parallels the stream for most of its length.

Classification:

Segment 1 - Ash Creek -- Recreational.

The total river corridor (1/4 mile on each side) includes 1,984 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The rocks which are found in this area are part of what is termed a "gneissic dome complex". They vary in age from 1,700 million years to 23 million years old, and are dominantly metamorphic rocks of volcanic parent-material.

The mountain range where this segment occurs has a complex history. The oldest rocks accumulated before 1,650 million years ago. These were cooked and deformed into gneiss and other types of metamorphic rock, around the same time that multiple bodies of granite were intruded into the mass about 1,400 to 1,650 million years ago. Additional magmas were injected into the Pinaleno Mountains around 1,100 million years ago.

Streamflow and Water Quality - Streamflow: Perennial with intermittent reaches. There is no data available to estimate median or duration of flows. Water Quality: The Arizona Department of Environmental Quality - Arizona Water Quality Assessment, for 1991, shows that the state water quality standards were met.

Vegetation - There are no known locations for TES plants, but suitable habitat may exist for Draba standleyi (Standley Whitlow-grass) and Erigeron heliographis (Pinalenos fleabane).

The landscape surrounding the corridor is dominated by four plant communities: Evergreen Sclerophyll, Douglas-Fir/White-Fir, Encinal Oak, and Desert Scrub Grassland. The following plant communities (Brown-Lowe) are found within the channel: 222.3 ROCKY MOUNTAIN RIPARIAN DECIDUOUS FOREST, 223.2 INTERIOR SOUTHWESTERN RIPARIAN DECIDUOUS FOREST AND WOODLAND, 223.221 POPULUS FREMONTI-SALIX SPP. ASSOCIATION.

Fisheries and Wildlife - GAME SPECIES: black bear, mule deer, white-tailed deer, mountain lion, javelina, and Apache trout are found here.

TES SPECIES: Mexican spotted owl, peregrine falcon, and the Mt. Graham red squirrel are found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species.

Visual Resources - The mixed broadleaf riparian area of Ash Creek is diverse in vegetation, dropping from Spruce-fir to desertscrub type of the lower elevations. Steep slopes, deep canyons and numerous waterfalls provide outstanding scenic qualities. Panoramic views of the Gila Valley may be seen from the mid to high elevations of the creek.

Cultural and Historical Resources - There are no prehistoric sites known within this segment. There are historic sites consisting of the Mt. Graham sawmill and an associated flume, vestiges of early 1900s logging. Little remains of these structures. The flume is not considered eligible for the National Register of Historic Places, because of its poor condition. The sawmill may be eligible for the Register on the basis of its archeological information potential. Outstandingly remarkable historic features such as remnants of an old sawmill operation provide artifactual evidence of early-anglo occupancy of Mt. Graham.

Air Quality - Air quality at Safford, Arizona, the nearest air quality monitoring station, meets National Ambient Air Quality Standards (NAAQS) for PM-10 (Particulate Matter less than 10 microns).

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located here. The river corridor is 6.2 miles long and contains 1,984 acres.

Water Rights and Water Resource Developments - Several small diversions, for summer homes and a Bible camp, exist near the headwaters. These have negligible effect on the free flowing character of the stream. A major diversion, in T8S R24E Section 3 for Game and Fish development downstream (Cluff Reservoir), has a visible effect on the channel's base flow. This diversion is just outside the segment. All known developments are entered in the Gila River Adjudication.

Transportation Facilities - Vehicle access is limited to the Swift Trail (State Highway 366) from the south and through the Cluff Ranch (private property) from the north. The Swift Trail is open, weather permitting, from April 15 to November 15 annually and is a graded dirt road. From just north of the roadway, at the Columbine area, access to the Ash Canyon segment is by Ash Creek Trail #307 heading north through the Canyon, terminating off the mountain system at the Cluff Ranch road.

Recreation Activities - Recreation use is primarily activities that result from trail facilities. Activities include hiking, riding, hunting, and wildlife viewing with some sightseeing and exploring. Use and numbers of people in this area is relatively small because of the limited accessibility (total use probably less than 1MRVD).

Current Special Management Designations - Segment 1 (Ash Creek) - The corridor is (partly) within the Mt. Graham Wilderness Study Area, and includes approximately 2.2 miles of channel and 704 acres of 6.2 miles and 1,984 acres of National Forest land.

Mining - The following areas have mineral withdrawals:

T8S R24E Section 21 & 28 - Arizona Church of Christ Bible Camp - 69 acres T8S R24E Section 29 - Columbine Administrative Site - 47 acres.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries within the segment. There are no mining claims within the segment.

Special Land Uses - A variety of facilities, including public utilities are located as follows:

T7S R24E Section 35 - AG&F Water Transmission - pipeline.
T8S R24E Section 2 & 3 - AG&F Water Transmission - concrete dam & pipeline
Section 21 & 28 - Arizona Church of Christ Bible Camp - private building.
Section 29 - LDS Church Organization Site - private building.
Section 29 - Old Columbine Recreation Residence Site - 14 private buildings.
Section 29 - Columbine Recreation Residence Water Transmission Section 29 - ADOT - Road Right-of-Way - road.

Livestock Grazing and Agriculture - The upper portion of Ash Creek is in an area which is closed to grazing. The creek flows through White Streak and Hawk Hollow Grazing Allotments. The riparian area is managed in accordance with LMP Standards and Guidelines. All boundary fences would have to be maintained.

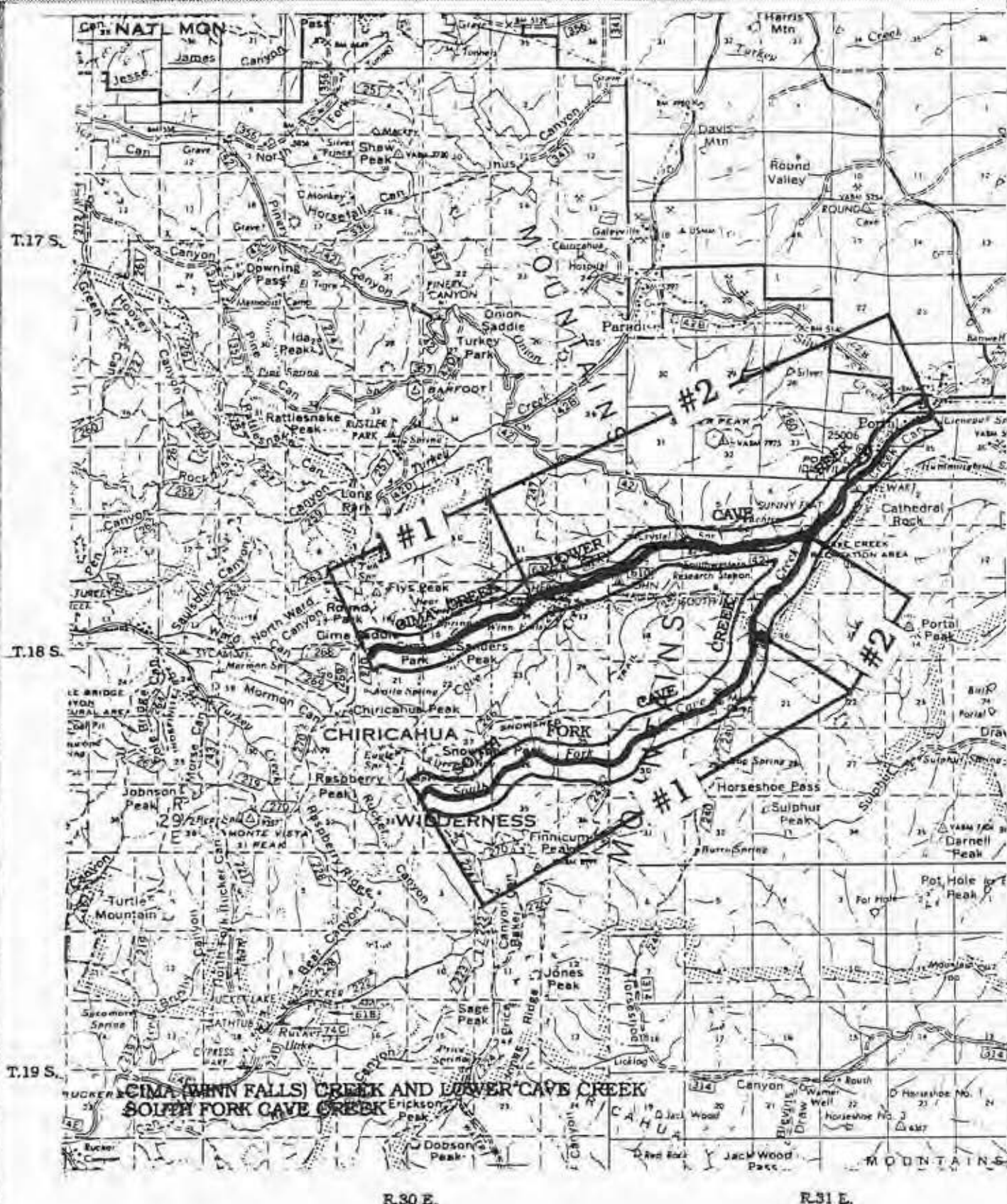
Timber Harvest - There is no ASQ (none of the corridor is identified as suitable for timber harvest). Poor access to the corridor makes fuelwood harvest unlikely. There are no proposals for harvesting wood within this area.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Safford, Thatcher, Pima, Bonita, Klondyke, Willcox, and Bowie, Arizona. Other users include individuals from urban centers such as: Tucson and Phoenix, Arizona. Ash Creek is a source of water for the Cluff Reservoir. The level of use (numbers of people) in this area is relatively small because of limited accessibility.

SOUTH FORK CAVE CREEK

SOUTH FORK CAVE CREEK



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MILES



SOUTH FORK CAVE CREEK

LOCATION

South Fork Cave Creek, Cochise County, Coronado National Forest.

South Fork Cave Creek originates high in the Chiricahua Mountains. The channel system flows to the East and then in a Northeasterly direction for approximately 7.6 miles, to the confluence with Cave Creek.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 7.6 miles of South Fork Cave Creek, from the headwaters to the confluence with Cave Creek, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (Upper) - South Fork Cave Creek
- 6.2 Miles
- from the headwaters to the Wilderness Boundary

- Segment 2 (Lower) - South Fork Cave Creek
- 1.4 Miles
- from Wilderness Boundary to confluence with Cave Creek

Eligibility:

South Fork Cave Creek (both segments) are freeflowing and without significant impoundments or diversions.

The outstandingly remarkable values include, but are not limited to:

Segment 1 (Upper) -- scenic, recreational, wildlife, and riparian.

This segment is known for its diverse flora and fauna. It is popular with birdwatchers, hikers, and backpackers. Fall colors (tree leaves) include oaks, sycamores, bigtooth Maple, and aspen. The year-round water flow here is fairly unique to southeastern Arizona and is important to wildlife. A number of TELS plants are associated with the high level of moisture within the canyon.

Segment 2 (Lower) -- scenic, recreational, geologic, wildlife, riparian and ecological.

This segment of the drainage is bordered by a narrow canyon through volcanic rock. The rock is multi-colored, and the formations include spires, caves, cliffs, and arches. Vegetation is diverse, including Douglas-fir, Apache Pine, Chihuashua Pine, Arizona Cypress, Arizona Sycamore, and Silverleaf Oak. This area has been designated a Zoological-Botanical Area. This area is nationally known as a bird watching area. Over 200 species of birds have been sighted here.

Classification:

Segment 1 (Upper) -- Wild.

Segment 2 (Lower) -- Scenic.

The total river corridor (1/4 mile on each side) includes 2,432 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - South Fork Cave Creek falls within an area of mostly andesite and rhyolite flows and rhyolitic tuffs. The rhyolites are of Tertiary age while the andesites are Tertiary and possibly upper Cretaceous. Irregular erosion of unstable minerals in the tuffs have created much of the spectacular scenery associated with Cave Creek. In Segment 2, the rock is multi-colored, and the formations include spires, caves, cliffs, and arches. These geologic features are significant enough to constitute an outstandingly remarkable value.

Streamflow and Water Quality - **Streamflow:** Perennial, with intermittent reaches. There is no data available to estimate median or duration of flows for either Segment 1 or Segment 2. **Water Quality:** USDA Forest Service data (entries in STORET 1975-1977) and analysis of inorganics and metals, in 1992, by the Arizona Department of Environmental Quality (ADEQ), indicate that the state water quality standards were met. Samples were taken in Segment 2 but are believed to be representative of both segments.

Vegetation - TES SPECIES: Draba standleyi (Standley's Whitlow-grass), Erigeron kuschei (Chiricahua fleabane), Rumex orthoneurus (Chiricahua dock), and Perityle cochisensis (Chiricahua rock daisy) are found here.

The landscape surrounding the Segment 1 corridor is dominated by two plant communities: Mexican Oak/Pine and Pine. Vegetation found within the corridor consists of: Bigtooth Maple, Aspen, Arizona Sycamore, and Oaks.

The landscape surrounding the Segment 2 corridor is dominated by two plant communities: Mexican Oak/Pine and Pinyon Pine/Oak. Vegetation found within the channel consists of: Douglas-Fir, Apache Pine, Chihuahua Pine, Arizona Cypress, Arizona Sycamore, and Silverleaf and Emory Oak.

The segments provide a nearly year-round water flow that contributes to the vegetative diversity. The water flow is fairly unique to southeastern Arizona and provides the opportunity for the outstandingly remarkable riparian value.

Fisheries and Wildlife - GAME SPECIES: black bear, mule deer, white-tailed deer, mountain lion, and javelina are found here.

TES SPECIES: Mexican spotted owl, peregrine falcon, elegant trogon, zone-tailed hawk, Berylline hummingbird, blue throated hummingbird, violet-crowned hummingbird, buff-breasted flycatcher, Chiricahua leopard frog, red bat, and the lesser long-nosed bat are found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species. The nearly year-round water flow provides a unique habitat for many species of wildlife. The fauna abound through out the corridor, providing an outstandingly remarkable value.

Visual Resources - Cavernous grottos in the steep canyon walls, overhanging cliffs, and lunar-like spire formations characterize this world renown scenic segment of the Cave Creek watershed. Visitors from around the globe are inspired by the scenic beauty of the geologic formations, sense of canyon enclosure, and diverse vegetative cover along the riparian stream banks. Brilliant colors of changing vegetation abound in the fall, striking forms of the canyon walls viewed through the deciduous tree canopy in winter and shifting textures of shade patterns beneath the dense summer shade of the large trees create a wild and scenic wonderland in South Fork.

Cultural and Historical Resources - There are no cultural resources recorded within the South Fork of Cave Creek corridor.

Air Quality - The air quality at Chiricahua National Monument, the nearest air quality monitoring station, is good. It meets Class I air quality standards.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located in the corridor. The river corridor: Segment 1 is 6.2 miles long and contains 1,984 acres, Segment 2 is 1.4 miles long and contains 448 acres.

Water Rights and Water Resource Developments - Segment 1: There are no diversions. Segment 2: Two small diversions have been developed within the corridor, they are a hand dug well and a spring, neither are operational at this time. These have negligible effect on the freeflowing character of the stream. All known developments are entered in the Gila River Adjudication.

Transportation Facilities - Segment 1: Non-mechanized access only. From South Fork PG (picnic ground), the South Fork Trail #243 follows the creek canyon southwest up the mountain a little over three miles before leaving the creek canyon. The Burro Trail #240 leaves the canyon at Maple Camp and heads south. The upper reaches of the creek are accessible from many trails as there is an extensive trail system near Chiricahua Peak that pass by or cross the creek.

Segment 2: Vehicle access is by Forest Road 622 off of FR42 from Portal to South Fork picnic area and trailhead. FR622 and FR42 are all weather roads open year round.

Recreation Activities - Segment 1: There are recreation activities that occur along various portions of the segment including hiking (and trail activities).

Segment 2: There are a variety of recreation developments and activities that occur along various portions of the segment including trails (and trail activities); picnic areas with day use; and a campground. Sightseeing, viewing of the scenery and wildlife, particularly birdwatching, are prominent uses. The capacity of the developed sites is 30 PAOT camping/picnicking with an additional 80 PAOT at the trailhead (total use approximately 100 MRVD).

The canyon is known nationally and internationally for its recreational opportunities.

Current Special Management Designations - Segment 1 (Upper) - The corridor is within the Chiricahua Wilderness, which includes 6.2 miles of channel and 1,984 acres of 1,984 total National Forest acres.

Segment 2 (Lower) - The corridor is within a Zoological-Botanical Area designation, which includes 1.4 miles of channel and 448 acres of 448 total National Forest acres.

Mining - The following areas have mineral withdrawals:

Segment 1 - This segment is withdrawn from mineral entry because it's within the Chiricahua Wilderness.

Segment 2 -
T18S R31E Section 9 - Cave Creek Recreation Area.

The remainder of Segment 2 is currently segregated until September 27, 1993. As of July 28, 1993 the Congress has passed, but the President has not signed, the Cave Creek Protection Act. This legislation will withdraw the area from mineral entry, including all of Segment 2.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries, in either segment. There are no mining claims, in either segment.

Special Land Uses - Permits are located as follows:

Segment 1: None.

Segment 2: T18S R31E Section 9 - Two summer home permits.

Livestock Grazing and Agriculture - Segment 1 - (Upper) South Fork Cave Creek - This segment is within a lightly grazed portion of the Cave Creek Grazing Allotment. Segment 2 - (Lower) South Fork Cave Creek - This area is closed to livestock grazing, due to riparian objectives and recreational opportunities.

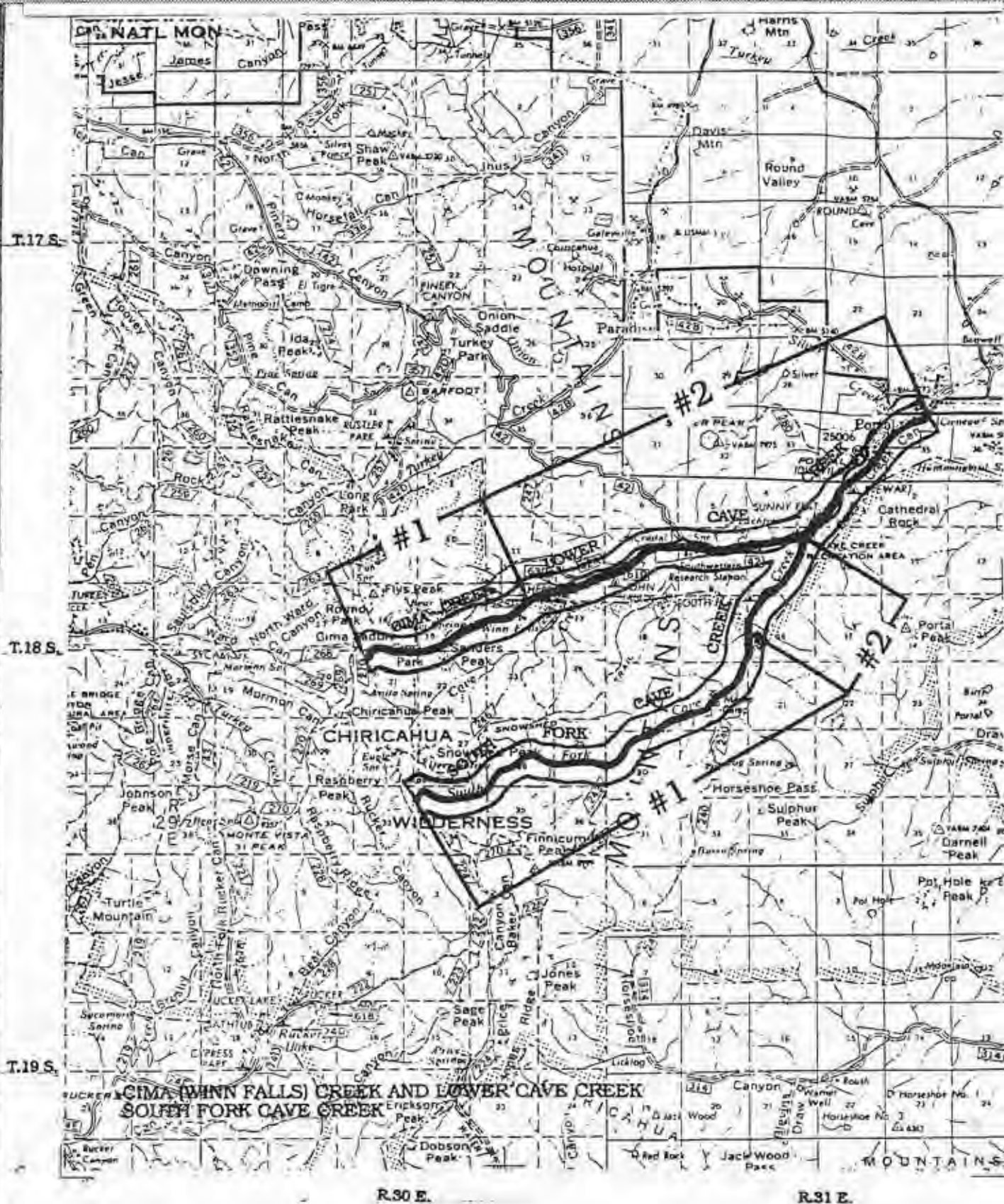
Timber Harvest - There is no ASQ (none of the corridor is identified as suitable for harvest). There are no future harvesting plans within the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Douglas, Bisbee, Sierra Vista, Tombstone, Benson, Willcox, Naco, Bowie, Elfrida, Portal, Arizona and Animas, New Mexico. Others users include individuals from urban centers such as: Tucson and Phoenix, Arizona; Las Cruces, New Mexico; and El Paso, Texas. The segments are used heavily by many individuals, groups, and organizations. This area is known nationally and internationally for wildlife viewing (particularly birdwatching).

CIMA (Winn Falls) CREEK/
LOWER CAVE CREEK

CIMA (WINN FALLS) CREEK AND LOWER CAVE CREEK



A horizontal number line with tick marks at 0, 1, 2, 3, and 4. The word "MILES" is written below the line.



CIMA (Winn Falls) CREEK/LOWER CAVE CREEK

LOCATION

Cima (Winn Falls) Creek - Lower Cave Creek. Cochise County, Coronado National Forest.

Cima Creek - Lower Cave Creek originates high in the Chiricahua Mountains. The channel system flows in a Northeasterly direction for approximately 16.5 miles, to an intermittent lake/pond near the New Mexico/Arizona border.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 9.5 miles of Cima/Lower Cave Creeks, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 - Cima Creek
- 2.5 Miles
- from the headwaters to the Wilderness Boundary
- Segment 2 - Lower Cave Creek
- 7.0 Miles
- from Wilderness Boundary to the Forest Boundary (near Portal).

Eligibility:

Segment 1 (Cima Creek) is freeflowing and without significant impoundments or diversions. There are several small diversions for Forest Service uses.

Segment 2 (Lower Cave Creek) is freeflowing and without significant impoundments or diversions. There are two low dams, both filled in, and an irrigation ditch, which is operational when the water level in the channel is high enough.

The outstandingly remarkable values include, but are not limited to:

Segment 1 (Cima Creek) -- scenic, recreational, and riparian.

The headwaters of the creek starts high in the Chiricahua Mountains, next to a CCC built log cabin. The creek flows down to Winn Falls, a 400 foot waterfall. A hike through this wilderness area is known for its scenery (including the cabin and the falls). The nearly year-round water is important to the riparian area and to wildlife. Along with the other segment (Lower Cave Creek), this is one of the longest perennial streams in southeastern Arizona.

Segment 2 (Lower Cave Creek) -- scenic, recreational, geologic, fish and wildlife, historic and riparian.

This is one of the longest flowing stretches of water in southeastern Arizona. The channel supports a large diversity of flora and fauna. This association of plants and animals is unique to forests of southeastern Arizona. Cave Creek Canyon is bordered by a deep canyon of volcanic rock. Scenic features include Cathedral Rock, a 2,000 foot tall escarpment. Recreational uses include bird and wildlife watching, natural history research, caving (Crystal Cave), camping, and hiking. Lower Cave Creek is known nationally and internationally for its wildlife viewing (particularly birdwatching). Geologic features include caves, arches, cliffs, and windows of volcanic and sedimentary rock. The creek supports a native fishery for the Longfin Dace. The canyon has numerous nesting areas for raptors, including the Mexican Spotted Owl.

Classification:

Segment 1 (Cima Creek) -- Wild.

Segment 2 (Lower Cave Creek) -- Recreational.

The total river corridor (1/4 mile on each side) includes 3,040 acres of which the Forest Service administers approximately 90 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Cima Creek falls within an area of mostly andesite and rhyolite flows and rhyolitic tuffs. The rhyolites are of Tertiary age while the andesites are Tertiary and possibly upper Cretaceous. Irregular erosion of unstable minerals in the tuffs have created much of the spectacular scenery associated with Cave Creek. In Segment 2, geologic features such as: caves, arches, cliffs, and windows of volcanic and sedimentary rock constitute an outstandingly remarkable value.

Streamflow and Water Quality - Streamflow: Perennial, with intermittent reaches. There is no data available to estimate median or duration of flows in either Segment 1 or 2. Water Quality: USDA Forest Service data (entries in STORET 1969-1977) indicate that the state water quality standards were met for uses described by the Arizona Department of Environmental Quality. Samples were taken in Segment 2 but are believed to be representative of both Segments 1 and 2.

Vegetation - TES SPECIES: Draba standleyi (Standley Whitlow-grass), Rumex orthoneurus (Chiricahua dock), and Polemonium pauciflorum ssp. hinckleyi (Hinckley's Jacob's Ladder) are all found here.

The landscape surrounding Segment 1 is dominated by two plant communities: Douglas-Fir/White-Fir, and Evergreen Sclerophyll. The channel consists of many species. The following is a short list of those species: Bigtooth Maple, Aspen, Arizona Sycamore, Douglas-Fir, Ponderosa Pine, Apache Pine, Alligator Juniper, and many Oaks.

The landscape surrounding Segment 2 is dominated by three plant communities: Evergreen Sclerophyll, Encinal Oak, and Desert Scrub Grassland. The channel consists, at least partly, of the following plants: Douglas-Fir, Apache Pine, Chihuahua Pine, Arizona Cypress, Arizona Sycamore, Silverleaf and Emory Oaks.

These segments provide one of the longest flowing stretches of water in southeastern Arizona. This flow provides the opportunity for the outstandingly remarkable riparian value. This value is dominated by the variety of riparian vegetative species found here.

Fisheries and Wildlife - TES SPECIES: Mexican spotted owl, peregrine falcon, elegant trogon, zone-tailed hawk, Berylline hummingbird, blue throated hummingbird, violet-crowned hummingbird, buff-breasted flycatcher, green rat snake, green toad, Chiricahua leopard frog, desert massasauga, red bat, and the lesser long-nosed bat are all found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species. Segment 2 supports a native fishery (Longfin Dace) and numerous nesting areas for raptors, including the Mexican Spotted Owl.

Visual Resources - Skull Rock, Mules Ears, and Crystal Cave are features dramatizing the jutting cliffs, spires, wind caves, and world renown geologic setting that visitors from around the world have come to equate with Cave Creek. The diversity of textures, colors and forms represented in the canyon's trees, shrubs, stream side vegetation and animals creates awe in the viewer driving the road or hiking the many trails in the canyon. The scenic beauty of Winn Falls in Segment 1 and Cathedral Rock just outside Segment 2 are breath taking.

Cultural and Historical Resources - Segment 1 (Cima Creek headwaters to Wilderness boundary) - The only recorded cultural resource in this segment is the Cima Park Guard Station. Constructed by the Civilian Conservation Corps (CCC), it has been nominated to the National Register of Historic Places.

Segment 2 (Wilderness boundary to Forest boundary) - A total of 15 cultural resource sites have been recorded within the area. Prehistoric and early historic period sites consist primarily of caves and rockshelters containing rock art. Sites represent both Mogollon and Apache occupation. The Chiricahua Apache attach considerable historical significance to the area. Later historic sites consist of Forest Service and Civilian Conservation Corps facilities. Especially prominent are the remains of the Cave Creek CCC camp, and the Portal Ranger Station [now called the Cave Creek Visitor Information Station-(VIS)]. The CCC camp is considered eligible for the National Register, and the Ranger Station (VIS) has been nominated.

The research potential of the prehistoric sites, the contemporary significance of certain sites to the Chiricahua Apache, and the historical associations of the Forest Service and CCC sites constitute an outstandingly remarkable historic value.

Air Quality - Air quality at Chiricahua National Monument, the nearest air quality monitoring station, is good. It meets Class I air quality standards.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are a few private parcels located within the corridor. The river corridor: Segment 1 is 2.5 miles long and contains 800 acres and Segment 2 is 7.0 miles long and contains 2,240 acres. There are 292.23 acres of private land in Segment 2. These acres are located in T18S R31E Section 7 (62.23 acres); Section 8 (72.24 & 6.76 acres); Section 9 (31 acres); and T17S R31E Section 34 & 35 (120 acres).

Water Rights and Water Resource Developments - There are several small diversions for Forest Service uses (domestic, recreation, wildlife, and livestock) within Segment 1. The diversions have negligible effect on the freeflowing character of the stream. In Segment 2 there are several similar diversions which have negligible effect on the freeflowing character of this segment. But, there are two dams, (Herb Martyr and John Hands) which, if dredged out, could have a noticeable effect on the freeflowing character of Segment 2 during some years. All known developments are entered in the Gila River Adjudication.

Transportation Facilities - Segment 1: Non-mechanized access only. From Herb Martyr CG, the Greenhouse Trail #248 reaches the upper segment of the creek before its headwaters. The Herb Martyr Trail #247 crosses the segment near Herb Martyr CG. Trail #270 traverses the headwaters of the segment.

Segment 2: Vehicle access is by Forest Road 42/42A from Portal to Herb Martyr CG. FR42/42A is an all weather road open year round. It passes several FS developed sites and through pieces of private property. The Snowshed Trail #246 crosses the segment after leaving FR42.

Recreation Activities - Segment 1: There are recreation activities that occur along various portions of the segment including hiking (and trail activities).

Segment 2: There are a variety of recreation developments and activities that occur along various portions of the creek including trails (and trail activities); picnic areas with day use; and campgrounds. Wildlife viewing, particularly birdwatching, is a prominent use. Capacity of the developed sites is 125 PAOT camping/picnicking; 100 PAOT trailhead; and a number of "pull-off" spots for wildlife or scenery viewing (total use approximately 25MRVD).

The canyon is known nationally and internationally for its recreational opportunities.

Current Special Management Designations - Segment 1 (Cima Creek) - The corridor is entirely within the Chiricahua Wilderness and includes 2.5 miles of channel and 800 acres of 800 total National Forest acres.

Segment 2 (Lower Cave Creek) - There are no special designations here.

Mining - The following areas have mineral withdrawal:

Segment 1 - This segment is withdrawn from mineral entry because it's within the Chiricahua Wilderness.

Segment 2 -
T18S R30E Section 12 & 13 - Cave Creek Recreation Area - 130 acres.
T18S R31E Section 9 - Cave Creek Recreation Area - 190 acres.
T17S R31E Section 34 - Portal Administrative Site - 53 acres.
T18S R31E Section 3 & 7 - Cave Creek Recreation Area.

The remainder of Segment 2 is currently segregated until September 27, 1993. As of July 28, 1993 the Congress has passed, but the President has not signed, the Cave Creek Protection Act. This legislation will withdraw the area from mineral entry, including all of Segment 2.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries, in either segment. Segment 2: There are 7 mining claims in the area (Newmont). In the past, there was mineral activity (silver, gold, copper, lead and tungsten) nearby. Recently, there was a proposal near the mouth of the canyon for gold exploration. The proposal was dropped while Congress considered legislation to withdraw the area from mineral entry.

Special Land Uses - A variety of facilities, including public utilities are located as follows:

Segment 1: None.

Segment 2;

T18S R31E Section 3, 7, 8, & 9 - Valley Telephone Coop - overhead line.

" " " " " " - Columbus Electric Coop - overhead line.

T17S R31E Section 34 - Ted Trolter Water Transmission - irrigation ditch.

" " " " - Columbus Electric Coop - overhead line.

" " " " - Valley Telephone Coop - overhead line.

" " " " - Maurice Ward Fence - rock wall fence.

" " " " - Portal Administrative Site - FS buildings/VIS.

" " " " - Robert Morse Water Transmission - domestic waterline, well and storage tank.

Livestock Grazing and Agriculture - Segment 1 - Cima (Winn Falls) Creek - The segment is within a lightly grazed portion of the Cave Creek Allotment. Segment 2 - Lower Cave Creek - The area is closed to cattle grazing, because of riparian concerns and recreational activities.

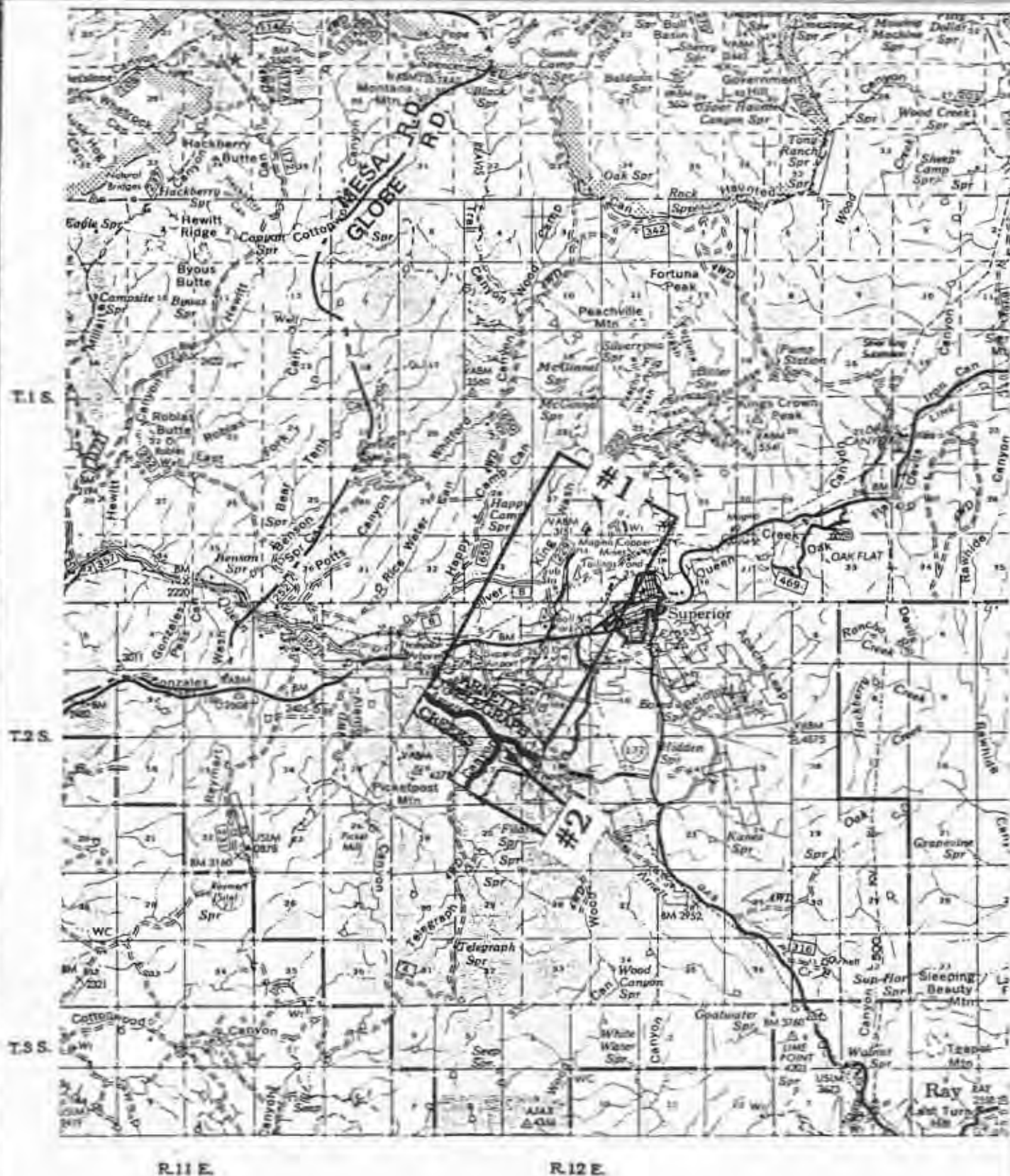
Timber Harvest - There is no ASO, since none of the corridor is identified as suitable for harvest. There has been some fuelwood harvest in the vicinity of Herb Martyr dam (generally outside the corridor) within the past 15 years. There are no future fuelwood harvesting plans within the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Douglas, Bisbee, Tombstone, St. David, Willcox, Elfrida, Bowie, and Portal, Arizona and Animas, New Mexico. Other users include individuals from urban centers such as: Tucson and Phoenix, Arizona; Lordsburg and Las Cruces, New Mexico; and El Paso, Texas. The canyon (Lower Cave Creek) is known nationally and internationally for its wildlife viewing (particularly birdwatching). The segment is heavily used (numbers of people).

ARNETT/TELEGRAPH CREEKS

ARNETT/TELEGRAPH CREEKS



ARNETT/TELEGRAPH CREEKS

LOCATION

Located in Pinal county (Congressional District 6), within the Tonto National Forest. Arnett and Telegraph Creeks are two very short, but special streams which come together southeast of the town of Superior, Arizona, just south of U.S. Highway 60.

Total Creek Length:	Arnett	- 9.5 miles
	Telegraph	- 4.1 miles
	Total	13.6 miles

Arnett - 2.4 miles, begins at Forest Service Development Road #4 and continues to the middle of Section 7, Township 2 South, Range 12 East.

Telegraph - 1.0 miles, begins at Forest Service Development Road #4 and continues to the confluence with Arnett Creek.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION

A. Segment Found Potentially Eligible for Designation:

Approximately 3.4 miles of stream are evaluated for this resource report.

Total acres in potential River Area: 1,120 acres
Percent administered by the Forest Service: 86 %

<u>Arnett</u>	Townships	2 S	Range 12 E	Sections	7, 8, 9, 16, 17
<u>Telegraph</u>	Townships	2 S	Range 12 E	Sections	7, 8, 17, 18, 20

B. Eligibility:

Free-flowing - Yes
Impoundments - None

C. Outstandingly Remarkable Values (ORV's):

Scenic
Riparian
Ecological

D. Classification:

Scenic

DESCRIPTION OF RESOURCES AND VALUES

A. Geology: Arnett and Telegraph Creeks are located near the southern edge of the Transition Zone between the Colorado Plateau and the Basin & Range Provinces of Arizona. The area is characterized by widespread plutonic and volcanic activity (Tertiary in age), and Basin & Range type in deformation. Volcanics include flows, intrusive rocks, and tuffs interbedded with sand, gravel and conglomerate. These units form steep cliffs along the creeks and offer excellent exposure of the flow rhyolite which has been identified as the Arnett Member of the Sleeping Buffalo Rhyolite here named for its type section along Arnett Creek.

B. Streamflow and Water Quality: Study segments are perennial interrupted, median flow is 0.7 cfs in Arnett Creek.

Water quality data from the Tonto National Forest indicates that Arizona water quality standards are met except for occasional turbidity violations during storm runoff.

As required by Arizona Revised Statute 49-221.D, water quality standards are expressed in terms of uses of the water resources that are identified as needing to be protected. Arnett and Telegraph Creeks were not rated by the Arizona Department of Environmental Quality in their 1992 Arizona Water Quality Assessment Report, but identified water quality standards include: warmwater Aquatic and Wildlife, Full Body Contact, Domestic Water Supply, and Agricultural Livestock Watering.

C. Vegetation: Arnett and Telegraph creeks each support forested, willow riparian communities, with co-dominance by Bonpland and Goodding willow. It is described by Brown (1982) as the *Salix gooddingii* Series. The potential River Area has been identified as having outstandingly remarkable riparian value due to the fact that it comprises one of the rarest riparian community types on the Tonto National Forest. The densely forested riparian areas on these streams are in stark contrast to the palo verde mixed cacti series on the adjoining uplands, which is dominated by saguaro, cholla cacti, and catclaw. The two tree-sized willow species dominate the overstory, with lesser amounts of sycamore, Fremont cottonwood, and ash. These willow communities are mid-seral, with 40-59% of the trees being in mature or old age classes. The overstory tree canopy is dense, averaging about 82% on both streams. The shrub/vine canopy varies from 80% on Telegraph Creek, to 20% on Arnett Creek. Commonest shrubs include seepwillow, desert broom, hopbush, Arizona grape, and burrobrush. Herbaceous understory is well developed, varying from 14% to 20%. Common herbaceous species include deer grass, rabbitfoot grass, mint, introduced bermuda grass, and various sedges and rushes.

Arnett and Telegraph Creeks received an outstandingly remarkable ecological value due to the well developed tree, shrub, and herbaceous components which contribute to excellent diversity in both species and vegetative structure. This vigorous vegetative growth contributes to good channel and bank stability, and a properly functioning floodplain, which enhances wetness and recharge of the shallow aquifer during high flow events.

Livestock grazing has been managed through a formal grazing system since 1985, and has been conducive to maintenance of a healthy riparian community.

D. Fish and Wildlife:

Fisheries: Arnett Creek is an excellent site for the reintroduction of native fish and has been proposed as a native fish reestablishment site. Two grants have been awarded to pursue this proposal, one from Arizona State Heritage Fund and the other from "Bring Back the Natives" program. Fish species being considered for reintroduction are: longfin dace, speckled dace, desert sucker, Sonora sucker, Gila roundtail chub, Gila topminnow, loach minnow, and spikedace. The last four fish listed are Threatened, Endangered or Sensitive species. The proposal involves the removal of the exotic green sunfish and the construction of a barrier to halt the recolonization of the sunfish from downstream.

Wildlife: Game species known to occur within the potential River Area include deer, bear, doves, rabbits, quail, and collared peccary.

Habitat is good to excellent within the potential River Area as a result of the conditions of the riparian vegetation. Special wildlife species occurring along Arnett and Telegraph Creeks may include:

U.S. Fish and Wildlife Service Threatened and Endangered species:

Peregrine falcon	- Endangered
Southwestern willow flycatcher	- Proposed endangered
Mexican garter snake	- Candidate
Arizona southwestern toad	- Candidate
Loggerhead shrike	- Candidate
Occult little brown bat	- Candidate
Southwestern cave myotis	- Candidate

Arizona State Threatened and Endangered species:

Western yellow-billed cuckoo	- Threatened
Lowland leopard frog	- Candidate
Belted kingfisher	- Candidate
Western red bat	- Candidate
Common black-hawk	- Candidate

Forest Service sensitive species:

Harris' hawk, coati, and the ringtail.

E. Visual Resources:

Visual Quality Objective:	Retention
Character Type:	Tonto
Character Subtype:	Sonoran Arizona Uplands
Variety Class:	A-Distinctive

This area has been identified as having outstandingly remarkable scenic values due to the very complicated geology and vegetation. The distinctive gorges and broad canyons with solid rock vertical walls provide many novel rock forms. Bare soil, desert pavement, barren rock textures with unique stringers of riparian deciduous trees along the creeks, creates a unique area juxtaposed with the vast surrounding undistinguished desert.

F. Cultural and Historical: There are four known sites (AR-03-12-02-16, -17, -363, -430) within the potential River Area (none on the National Register) with known occupation occurring from around AD 1000 - 1910-. The few known sites in the area are small ephemeral prehistoric sites. Historic structural remains associated with the remains of Pinal City, occupied from 1880-1910, are located immediately to the north of the creeks, and reports indicate that a 1930's Civilian Conservation Corps camp was located within the area.

LAND USES AND DEVELOPMENTS

A. Land: Arnett/Telegraph Creeks potential River Area is 3.4 miles in length and, contains 1,120 acres (including four parcels of private land):

970 acres (86%) National Forest	
150 acres (14%) private land:	75 acres in sec. 16, T. 2 S., R. 12 E. GLSRBM
	15 acres in sec. 16, T. 2 S., R. 12 E.
	40 acres in sec. 9, T. 2 S., R. 12 E.
	20 acres in sec. 8, T. 2 S., R. 12 E.

There are no land withdrawals within the potential River Area.

B. Water Rights and Water Resource Developments: The Forest Service has filed an application for an instream flow water right for the Arnett Creek portion of the potential River Area in 1992. Instream flow quantities range from 0.5 cfs in June to 3.0 cfs in March.

One certificate exists for diversion of 7.3 acre feet per year for domestic and mining purposes on National Forest lands within the potential River Area, but evidence of this diversion does not exist and it currently does not affect the free flowing character of the segment. Certificates for diversion of 109.7 acre feet per year exist for irrigation and domestic use on private lands upstream of the potential River Area. Affect of these diversions on stream flow is unknown, but potentially could be significant during the low flow season when flows decline to less than 0.5 cfs. These diversions do not affect the free flowing character of the reach. A fish barrier is proposed near the downstream end of the potential River Area to prevent migration of nonnative fish species into Arnett Creek. This barrier would have a negligible effect on the segments free-flowing character.

C. Transportation Facilities: Access to the upper end of Arnett and Telegraph Creeks, at the boundaries of the potential River Area, is provided by Forest Development Road #4. This is an unimproved dirt road and its head of Telegraph Creek forms the southwestern boundary of the potential River Area. Other portions of the potential River Area are not accessible by Forest road or trail. There are remnants of closed travelways in the general area.

D. Recreation Activities and Facilities: No developed recreation sites are established within the potential River Area, however, the Boyce-Thompson Arboretum (Arizona State Parks) is located just down-stream. Dispersed recreation activities available are: cross-country hiking (no hiking trails are established in the area), picnicking, backpacking, and wildlife watching. The potential River Area is in close proximity to the town of Superior and US Highway 60, but access to the area is limited. An estimated 200 recreation visitor days (RVD's) occur within the potential River Area. Commercial recreational outfitter/guide hunting activity for small game is possible, and environmental activities associated with the Arboretum might be expected due to its location.

E. Special Management Designations:

Wilderness - none

Picket Post Mountain Research Natural Area - 1,120 acres

The Research Natural Area is managed to provide opportunities for nondisruptive research and education. 57% (1.4 miles of Arnett Creek and 0.5 miles of Telegraph Creek) of the potential River Area of Arnett and Telegraph creeks are contained within the Research Natural Area.

F. Mining:

There are no acres of potential River Area withdrawn from mineral entry. All acreage remains open to mineral entry.

There are approximately 156 existing claims on Arnett Creek and 53 existing claims on Telegraph Creek which have been identified (Bureau of Land Management, May 10, 1993) within sections associated with the potential River Area.

There are no oil or gas leases within the potential River Area. The potential River Area is located within a zone identified as exhibiting low probability for economic petroleum reserves. Two known thermal wells are located approximately two miles to the south, but geochemical evidence does not substantiate geothermal resources in the region. There are no active mining operations or quarries located within the potential River Area, however the area is adjacent to numerous known occurrences of copper, zinc, silver, gold, lead, molybdenum, manganese, and perlite.

G. Special Uses: Special Use Permits issued, associated with identified sections within the potential River Area are:

Boyce Thompson	- Arboretum (experimental area)
Mike Guzman	- Road
Arizona Public Service	- 4 KV powerline

H. Livestock Grazing and Agriculture:

No agriculture occurs within the potential River Area. The Superior Allotment contains both fence and watergap improvements and has 4,361 authorized animal unit months (AUM's). Approximately 3% of the allotment is within the potential River Area, which would equate to 131 AUM's of grazing annually.

I. Timber: The area contains 735.9 acres of timber which are not suitable for harvest. Fuelwood activity is extremely limited receiving only occasional use, but when allowed it is open under permit for personal fuelwood gathering.

SOCIAL AND ECONOMIC VALUES

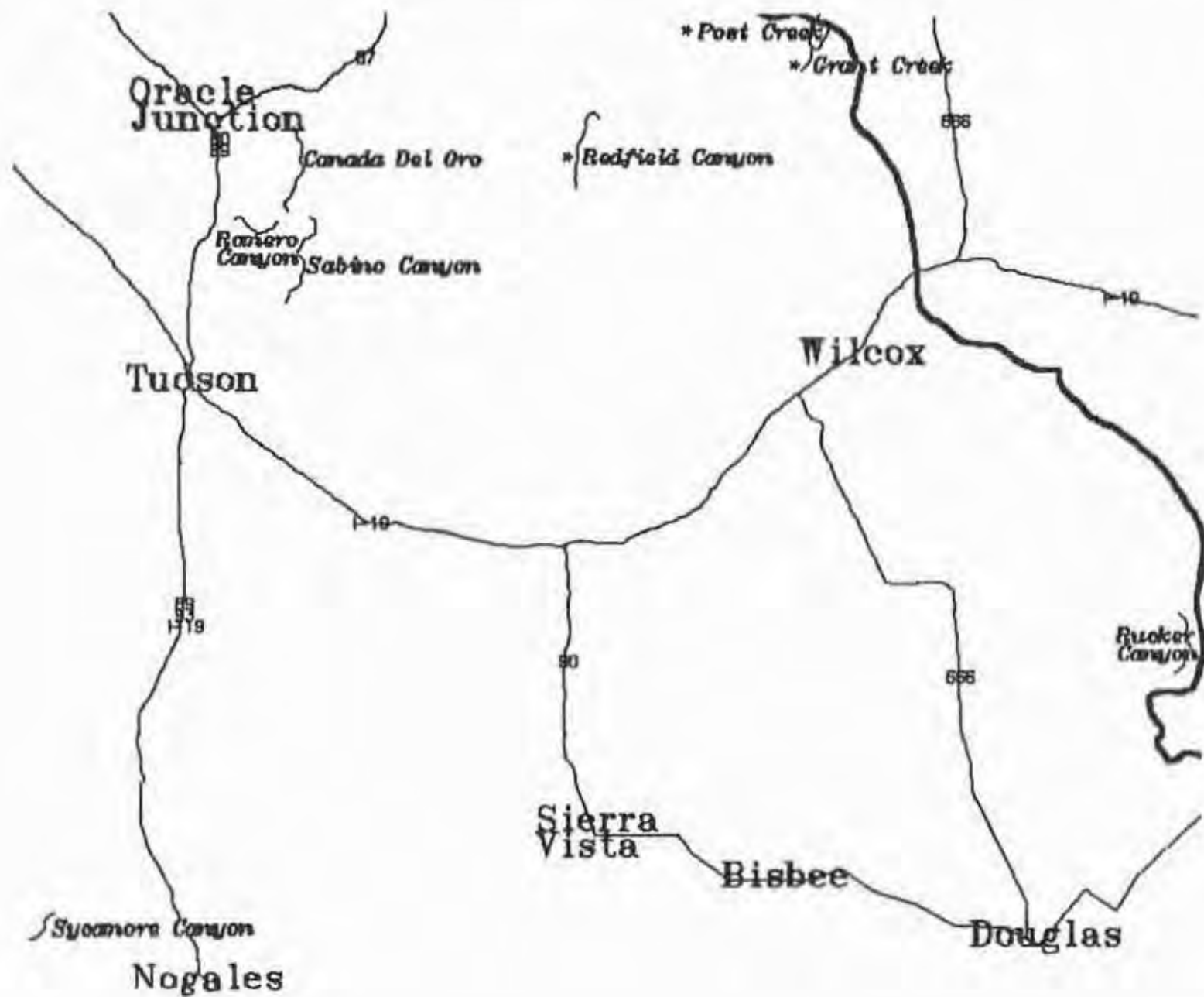
Social: There are various entities of our society that derive social benefits from, and place social value upon a wide and varying range of resources that the the Forest Service has been mandated to manage. Some individuals place emphasis upon a single resource, while a broader field of interest is expressed by others. Some people place a high value on fish and wildlife that benefits them just in the knowledge of knowing that these species exist, and in a similar manner, value is placed upon water with its associated instream flow. Recreational users derive social benefits from the opportunities of being fairly secluded, which offers solitude to hikers and picnickers, in an area with preserved unique, natural conditions, while the livestock permittee, prospectors, and local land owners derive social benefits from evolving a lifestyle that affords them the opportunity to enjoy a way of life that is associated with the resources contained upon the National Forest System lands.

Economic: Economic values of recreational use were calculated by using a 1993 dollar value of \$11.78 per recreation visitor day. An estimated visitation of 200 recreation visitor days occurred within the potential River Area resulting in a total economic value of \$2,356.00 per annum.

Allotment fees for 1993 are \$1.86 per animal unit month for a total of 131 animal unit months, occurring on the allotments within the potential River Area, resulting in \$243.66 per annum in fees being collected by the government. There is no suitable timber for harvest within the potential River Area.

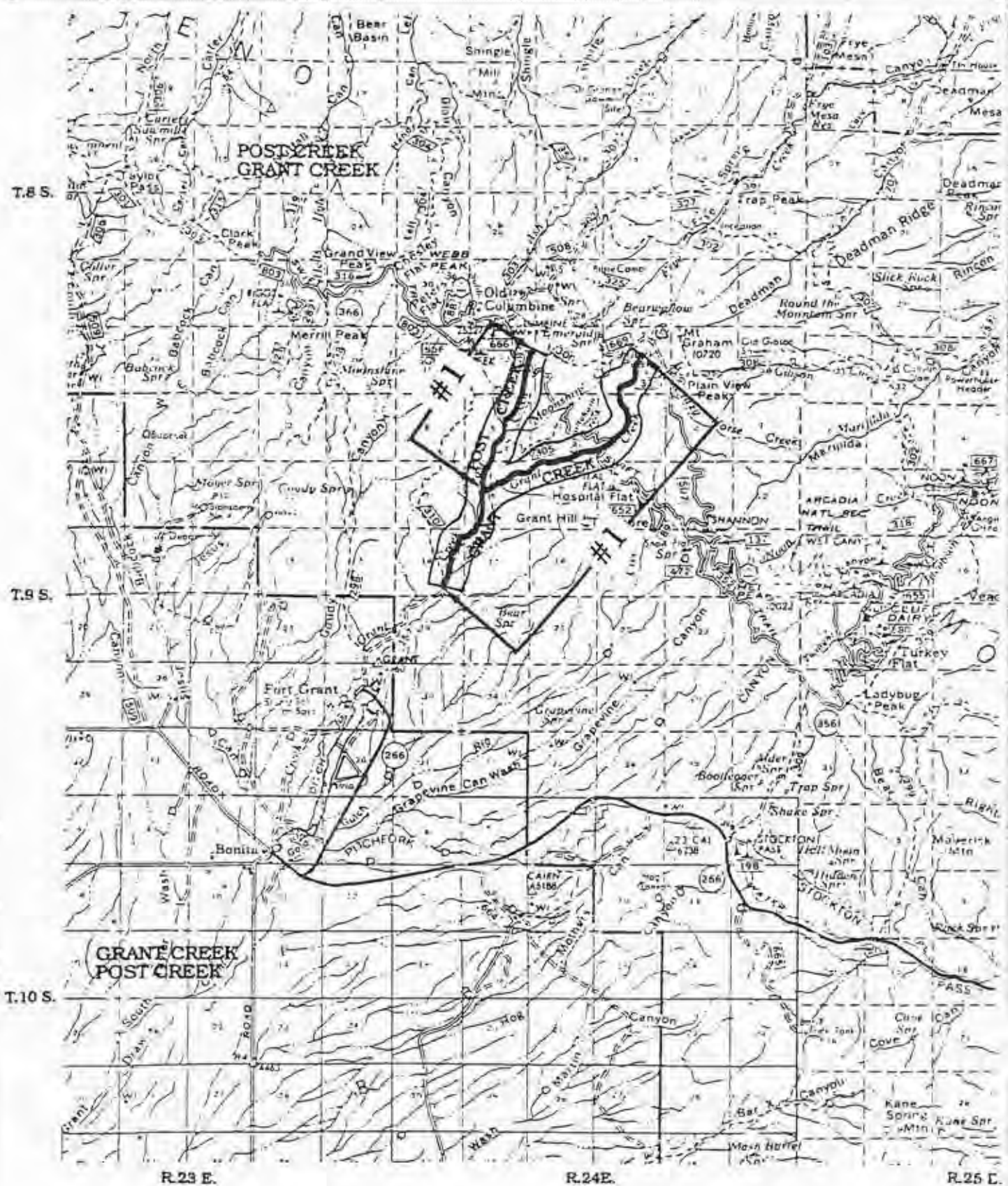


329



GRANT CREEK

GRANT CREEK



GRANT CREEK

LOCATION

Grant Creek, Graham County, Coronado National Forest,

Grant Creek originates high in the Pinaleno Mountains. The channel system flows in a Southwesterly direction for approximately 12 miles, to the confluence with South Taylor Wash (this system is part of the Wilcox Playa).

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 5.75 miles of Grant Creek, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (only one segment) - Grant Creek
- 5 Miles
- from the headwaters to the diversion approximately .75 mile from the Forest Boundary.

Eligibility:

This segment of Grant Creek is freeflowing and without significant impoundments or diversions. The segment has two impoundment/diversion structures (not operational) which served the historic calvary post at Ft. Grant.

The outstandingly remarkable values include, but are not limited to:

Segment 1 - Grant Creek -- scenic and ecological.

Spectacular views of water falls and the steep rock faces on the side slopes of the Pinaleno Mountains may be seen as well as panoramic views of the Sulphur Springs Valley below and the Gallura Mountains across the valley. The mixed broadleaf riparian area vegetation is diverse. The creek drops from the mixed conifer zone (dominant species include Engelmann spruce, Douglas-fir, and thinleaf alder with less present Box elder and Rocky Mountain Maple) to high desert shrub in the lower reaches (oaks, alder, sycamore and juniper). The high country (above 6500 feet) has been closed to cattle grazing. The rugged steep canyons and waterfalls provide outstanding scenic qualities. The pools of water along the creek provide opportunities for native fish angling. The Grant Creek trail #305 parallels the creek for much of its length.

Classification:

Segment 1 - Grant Creek -- Recreational.

The total river corridor (1/4 mile on each side) includes 1,600 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The rocks which are found in this area are part of what is termed a "gneissic dome complex". They vary in age from 1,700 million years to 23 million years old, and are dominantly metamorphic rocks of volcanic parent-material.

The mountain range where this segment occurs has a complex history. The oldest rocks accumulated before 1,650 million years ago. These were cooked and deformed into gneiss and other types of metamorphic rock, around the same time that multiple bodies of granite were intruded into the mass about 1,400 to 1,650 million years ago. Additional magmas were injected into the Pinaleno Mountains around 1,100 million years ago.

Streamflow and Water Quality - Streamflow: Mostly perennial, with intermittent reaches. There is no data available to estimate median or duration of flows. Water Quality: Analysis of inorganics and metals, in 1992, indicate that the state water quality standards were met.

Vegetation - There are no known locations for TES plants here.

The landscape surrounding the corridor consists of four plant communities which are: Douglas-Fir/White-Fir, Pine, Encinal Oak, and Spruce/Fir. The channel plant community is classified as (Brown-Lowe): 223.224 ALNUS OBLONGIFOLIA ASSOCIATION.

Fisheries and Wildlife - GAME SPECIES: black bear, mule deer, white-tailed deer, mountain lion, javelina, and Apache trout are found here.

TES SPECIES: Mexican spotted owl, and peregrine falcon are found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species.

Visual Resources - The mixed broadleaf riparian area vegetation is diverse, dropping from the mixed conifer zone to desert scrub in the lower reaches. Spectacular views of water falls and the steep rock faces on the side slopes of the Pinaleno Mountains may be seen. Also, panoramic views of the Sulphur Springs Valley below and the Galupuro Mountains across the valley may be seen from the upper reaches of this segment. The rugged steep canyons and waterfalls provide outstanding scenic qualities.

Cultural and Historical Resources - Recorded cultural resources consist of two prehistoric sites and one historic site. The age or cultural affiliation of the prehistoric sites has not been determined, and their National Register eligibility has not been evaluated.

The historic site is a segment of the water system which once supplied Fort Grant, and is considered potentially eligible for the National Register. It is an example of an early, and successful, hydraulic system involving a mountain stream in the Southwest.

Air Quality - The air quality at Safford, Arizona, the nearest air quality monitoring station, meets NAAQS (National Ambient Air Quality Standards) for PM-10 (Particulate Matter less than 10 microns). However, visibility monitoring for the Galupuro Wilderness, 24 miles to the west, indicates air quality is frequently substandard with respect to visibility.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located here. The river corridor is 5 miles long and contains 1,600 acres.

Water Rights and Water Resource Developments - There are no operational water resource developments within this segment.

Transportation Facilities - The northern end of the 5 mile creek segment is dissected and accessed by the Swift Trail (AZ 366) which is open, weather permitting, from April 15 to November 15 annually and is a graded dirt road. There is virtually no other access on the north end. On the southern end the Grant Creek segment is accessible via FR 157. The Grant Creek Trail #305 starts at the end of FR 157 and parallels Grant Creek to the Post Creek junction where it heads north out of the canyon bottom. Grant Goudy Ridge Trail #310 also starts at the end of FR 157 but immediately heads west up the ridge to Soldier Creek Campground. In order to drive to the trailhead at the end of FR 157 a key must be obtained from the Fort Grant Administration Building to get through the locked gate.

Recreation Activities - Recreation use is primarily activities that result from trail facilities. Activities include hiking, riding, hunting, and wildlife viewing with some sightseeing and exploring. Use and numbers of people in this area is relatively small because of the limited accessibility (total use probably less than .1MRVD).

Current Special Management Designations - Segment 1 (Grant Creek) - The corridor is (partly) within the Mt. Graham Wilderness Study Area, and includes approximately 2.0 miles of channel and 640 acres of the 5.0 miles and 1,600 acres of National Forest land. The extreme upper portion of the segment (near Hawk Peak) is within Critical Habitat for the Mt. Graham Red Squirrel.

Mining - The following area has a mineral withdrawal:

T8S R24E Section 34 - High Peak Potential Recreation Area - 71 acres.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries within the segment. There are no mining claims within the segment.

Special Land Uses - The following are located within the segment:

T8S R24E Section 3 & 4 - ADOT Road Right-of-Way - State Highway.

T9S R24E Section 8, 17 & 18 - Arizona State Industrial School Water Transmission - domestic underground pipeline.

Livestock Grazing and Agriculture - The upper portion of Grant Creek is in an area closed to grazing. The creek flows through the Grant Creek Allotment, and near the Bonita Allotment boundary. The riparian area is managed under the LMP Standards and Guidelines. The allotment boundary fence would have to be maintained to help manage the riparian area.

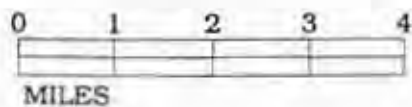
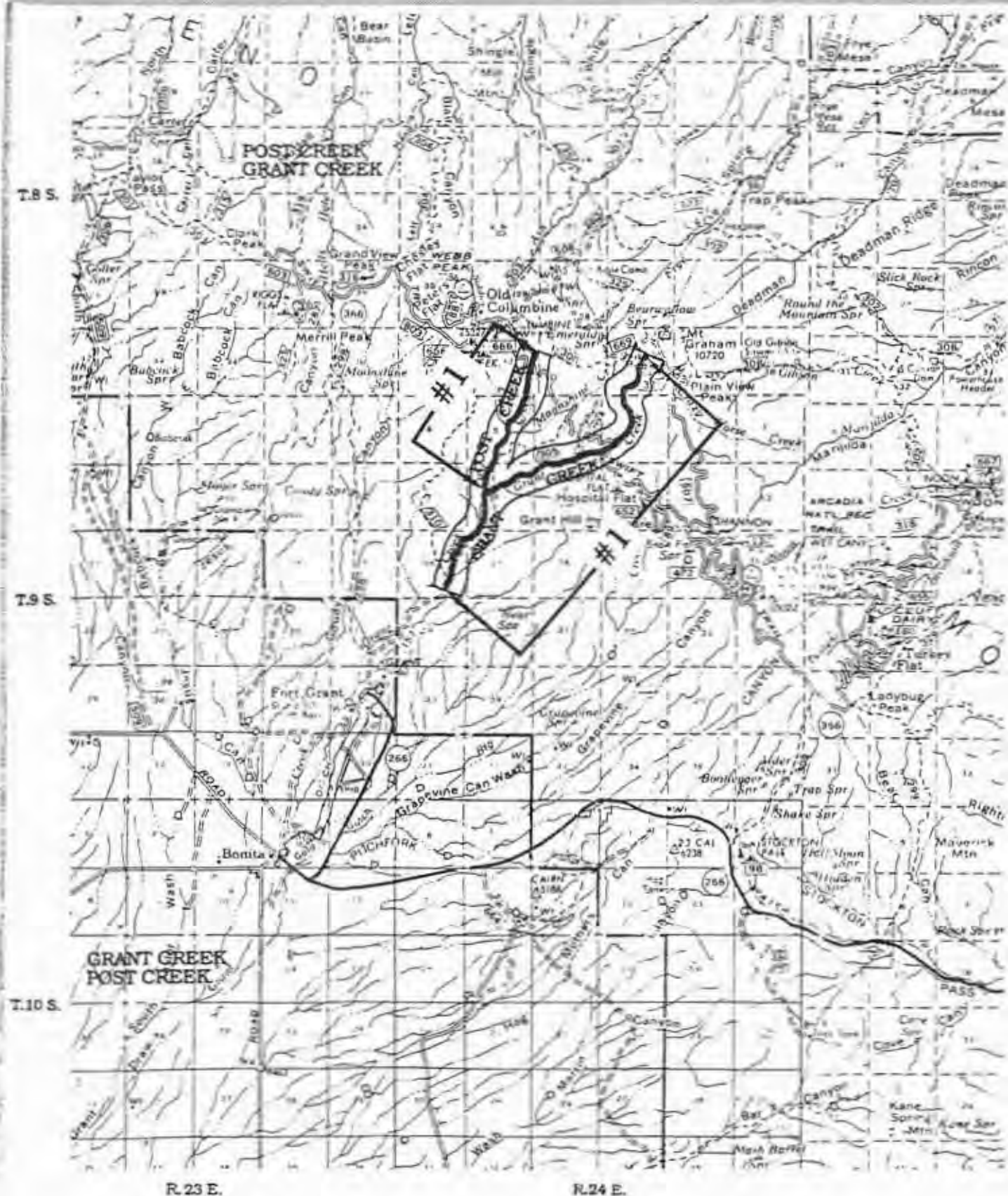
Timber Harvest - There is no ASQ (none of the corridor is identified as suitable for harvest). Historically, timber was harvested from the corridor near the Swift Trail (State Highway 366). There are no future plans to harvest timber within the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Safford, Thatcher, Pima, Bonita, Klondyke, Willcox, and Bowie, Arizona. Other users include individuals from urban centers such as: Tucson, and Phoenix, Arizona. Grant Creek is a source of water for a reservoir near Bonita. The level of use (numbers of people) in this area is relatively small because of limited accessibility.

POST CREEK

POST CREEK



POST CREEK

LOCATION

Post Creek, Graham County, Coronado National Forest.

Post Creek originates high in the Pinaleno Mountains. The channel system flows in a southerly direction for approximately 2.2 miles, to the confluence with Grant Creek.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 2.2 miles of Post Creek, from the headwaters to the confluence with Grant Creek, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (only one segment) - Post Creek
- 2.2 Miles
- From the headwaters to confluence with Grant Creek.

Eligibility:

This segment (Post Creek) is freeflowing and without impoundments or diversions.

The outstandingly remarkable values include, but are not limited to:

Segment 1 - Post Creek -- scenic.

Access is limited due to the steep terrain through which the creek flows. Vegetation ranges from Engelmann spruce, Douglas-fir in the high elevations to Arizona white oak, Arizona walnut, chokecherry, Virginia creeper and bracken fern in the lower elevations. The steep rock faces of the Pinaleno Mountain side slopes may be seen along the creek.

Classification:

Segment 1 - Post Creek -- Scenic.

The total river corridor (1/4 mile on each side) includes 704 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - The rocks which are found in this area are part of what is termed a "gneissic dome complex". They vary in age from 1,700 million years to 23 million years old, and are dominantly metamorphic rocks of volcanic parent-material.

The mountain range where this segment occurs has a complex history. The oldest rocks accumulated before 1,650 million years ago. These were cooked and deformed into gneiss and other types of metamorphic rock, around the same time that multiple bodies of granite were intruded into the mass about 1,400 to 1,650 million years ago. Additional magmas were injected into the Pinaleno Mountains around 1,100 million years ago.

Streamflow and Water Quality - Streamflow: Intermittent, with perennial reaches. There is no data available to estimate median or duration of flows. Water Quality: The data collected by ADEQ (Arizona Department of Environmental Quality) - Arizona Water Quality Assessment, for 1991, indicate that the state water quality standards were met.

Vegetation - There are no known TES plant locations within this segment.

The landscape surrounding the corridor consists of three plant communities which are: Douglas-Fir/White-Fir, Pine, and Encinal Oak. Plant species found within the channel (not all inclusive) are: Arizona White Oak, Arizona walnut, chokecherry, Virginia creeper and bracken fern.

Fisheries and Wildlife - GAME SPECIES: black bear, mule deer, white-tailed deer, mountain lion, javelina, and Apache trout are found here.

TES SPECIES: Mexican spotted owl, Mt. Graham red squirrel, and the peregrine falcon are found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species.

Visual Resources - The rugged steep slopes, rock faces and waterfalls provide outstanding scenic qualities.

Cultural and Historical Resources - This stream segment is uninventoried, therefore no cultural resources are recorded.

Air Quality - The air quality at Safford, Arizona, the nearest air quality monitoring station, meets the National Ambient Air Quality Standards for PM-10 (Particulate Matter less than 10 microns). However, visibility monitoring for the Galiuro Wilderness, 24 miles to the west, indicates air quality is frequently substandard with respect to visibility.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located within this segment. The river corridor is 2.2 miles long and contains 704 acres.

Water Rights and Water Resource Developments - There are no known diversions within this segment.

Transportation Facilities - From the north, vehicle access is limited to the Swift Trail (AZ 366) near Soldier Creek Campground. The Swift Trail is open, weather permitting, from April 15 to November 15 annually and is a graded dirt road. The southern end of this segment can be reached via the Grant Creek Trail #305 which starts at the Cunningham Campground and immediately drops down a long series of switchbacks into Post Creek Canyon. The southern end of this segment can also be reached from the end of FR157 at the Fort via Grant Creek Trail # 305 which follows Grant Creek north up the canyon to the junction of Post Creek.

Recreation Activities - Recreation use is primarily activities that result from trail facilities. Activities include hiking, riding, hunting, and wildlife viewing with some sightseeing and exploring. Use and numbers of people in this area is relatively small because of the limited accessibility (total use probably less than 0.1MRYD).

Current Special Management Designations - Segment 1 (Post Creek) - The corridor is (mostly) within the Mt. Graham Wilderness Study Area and includes approximately 1.8 miles of channel and 576 acres of 2.2 miles and 704 acres total National Forest lands.

Mining - The following areas have mineral withdrawals:

T8S R24E Section 32 - Columbine Administrative Site - 47 acres;
T8S R24E Section 32 - Soldier Creek Recreation Area - 40 acres.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries located here. There are no mining claims within this segment.

Special Land Uses - The following uses are located in:

T8S R24E Section 32 - ADOT Right-of-Way - State Highway.
T9S R24E Section 8 - Arizona State Industrial School Water Transmission
- domestic underground pipeline.

Livestock Grazing and Agriculture - The upper portion of Post Creek is in an area closed to grazing. The creek flows through the Bonita Allotment, into the Grant Creek Allotment. The riparian is managed under the LMP Standards and Guidelines. All boundary fences would have to be maintained in order to manage the proposed corridor.

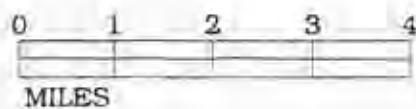
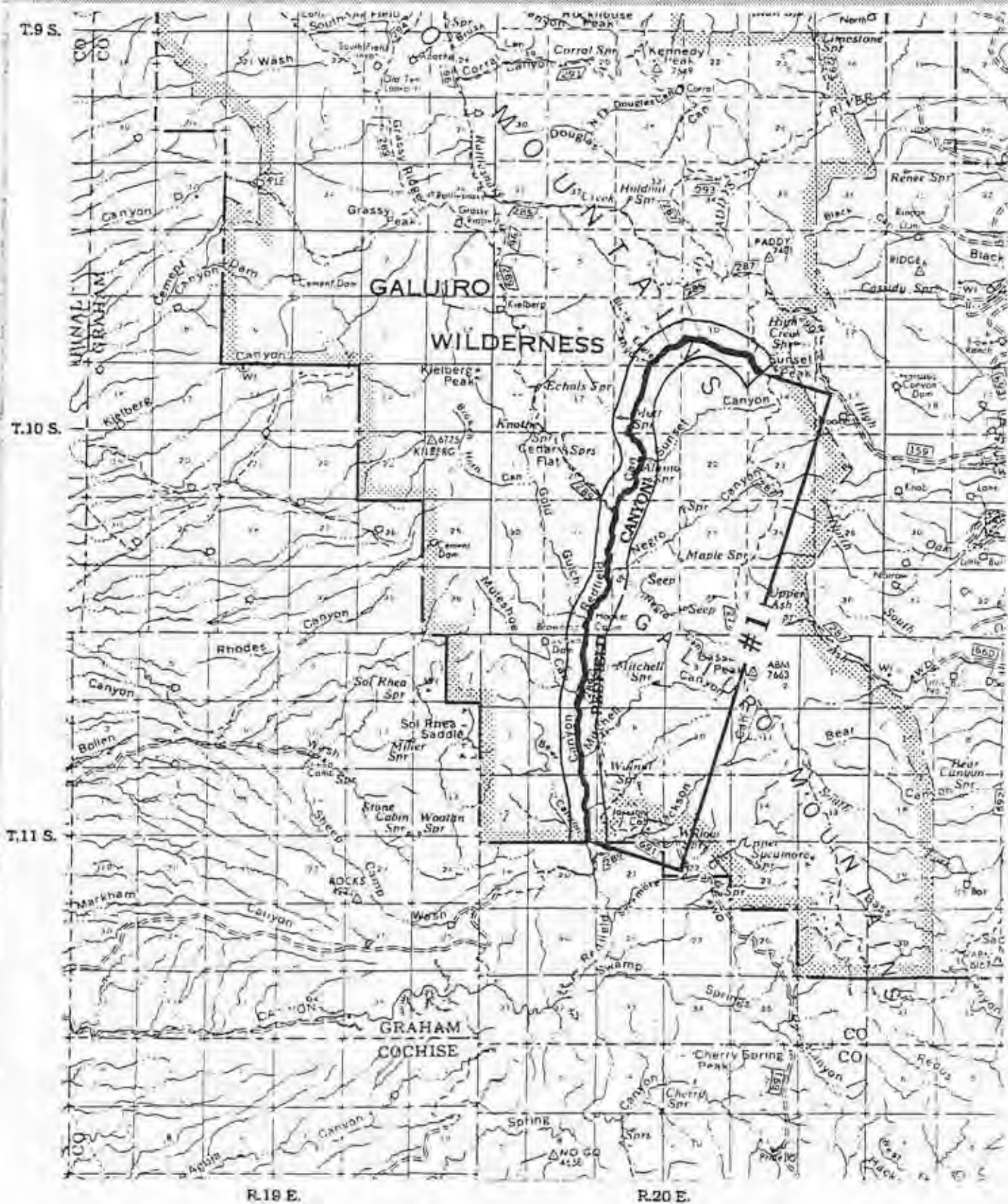
Timber Harvest - None of the corridor is identified as suitable for timber harvest (there is no ASQ). Historically, timber was harvested from the corridor near the Swift Trail (State Highway 366). There are no current plans to harvest timber from the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Safford, Thatcher, Pima, Bonita, Klondyke, Wilcox, and Bowie, Arizona. Other users include individuals from urban centers such as: Tucson and Phoenix, Arizona. Post Creek is a tributary to Grant Creek which feeds a reservoir near Bonita.

REDFIELD CANYON

REDFIELD CANYON



REDFIELD CANYON

LOCATION

Redfield Canyon, mostly in Graham County, some (approximately 2 miles) in Pima County, Coronado National Forest.

Redfield Canyon originates high in the Galiuro Mountains, within the Galiuro Wilderness. The channel system flows in a Westerly to Southerly then Westerly direction for approximately 24 miles, to the confluence with the San Pedro River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 9.1 miles of Redfield Canyon, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (only one segment) - Redfield Canyon
- 9.1 Miles
- from the headwaters to the Forest Boundary.

Eligibility:

This segment (Redfield Canyon) is freeflowing and without significant impoundments or diversions.

The outstandingly remarkable values include, but are not limited to:

Segment 1 - Redfield Canyon -- scenic.

This rugged and remote canyon of the Galiuro Wilderness provides outstanding views of red canyon walls and outcrops particularly during early morning hours. The riparian vegetation includes large stately sycamores, Arizona walnut, juniper and ash. Part of the West Divide trail #289 is located in the southern portion of Redfield Canyon.

Classification:

Segment 1 - Redfield Canyon -- Scenic.

The total river corridor (1/4 mile on each side) includes 2,912 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Redfield Canyon is situated within the Upper Oligocene Galiuro Volcanics. The southernmost three miles of this river segment are divided from the northern portion by a normal fault which has dropped the western part of the range down in relation to the eastern part. Two types of volcanics are seen, depending upon the segment of canyon traveled. Andesite flows make up the sharp, bold cliffs, which sometimes display columnar jointing. Ash-flow tuffs create a cliff and slope topography. Erosion in these ash-flow cliffs sometimes takes on a "fairylend" appearance, as less resistant minerals are removed by weathering.

Streamflow and Water Quality - **Streamflow:** The flow is intermittent. There is no data available to estimate median or duration of flows. **Water Quality:** The state water quality standards were met (Source: ADEQ, Arizona Water Quality Assessment for 1991).

Vegetation - **YES SPECIES:** There are no known locations for YES plants. Salvia missae (Aravaipa sage), a USFWS C2 species, is found in this area.

The landscape surrounding the corridor is dominated by an Encinal Oak Community. The channel has been classified (Brown-Lowe) as: 222 COLD TEMPERATE SWAMP and RIPARIAN FORESTS, 223.22 MIXED BROADLEAF SERIES, 224.52 MESQUITE SERIES, and 224.53 COTTONWOOD-WILLOW SERIES.

Fisheries and Wildlife - **GAME SPECIES:** black bear, mule deer, white-tailed deer, mountain lion, javelina, and bighorn sheep are found here.

YES SPECIES: Mexican spotted owl, and peregrine falcon are found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species. Redfield Canyon provides nesting areas for rarely seen raptors such as the Common Black-Hawk and the Zone-tailed Hawk. The unusual coatimundi may be sighted on the rugged canyon slopes.

Visual Resources - This rugged and remote canyon of the Galupuro Wilderness provides spectacular views of red canyon walls and rock outcrops particularly during early morning hours. This canyon of the Galupuro Wilderness provides outstanding scenic qualities.

Cultural and Historical Resources - This stream segment is uninventoried, therefore, no cultural resources are recorded.

Air Quality - Visibility data collected nearby, from 1984 through 1992, indicate that air quality is frequently substandard with respect to visibility.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located here. The river corridor is 9.1 miles long and contains 2,912 acres.

Water Rights and Water Resource Developments - There are several small diversions for wildlife uses. These have negligible effect on the freeflowing character of the stream. All known developments are entered in the San Pedro River Adjudication.

Transportation Facilities - On the southern end vehicle access is limited to Forest Road 691 (4wd) that crosses private property, State and BLM lands. From FR691 the West Divide Trail #289 follows the canyon north for about 7 miles. From the north vehicle access is from FR159. From the end of FR159 the High Creek Trail #290 heads west to the East Divide Trail #287 which heads south to Sunset Peak the north end of the segment.

Recreation Activities - Recreation use is primarily activities that result from trail facilities. Activities include hiking, riding, hunting, and wildlife viewing with some sightseeing and exploring. Use and numbers of people in this area is relatively small because of the limited accessibility (total use probably less than 0.1MRVD).

Current Special Management Designations - Segment 1 (Redfield Canyon) - The corridor is within the Galupuro Wilderness and includes 9.1 miles of channel and 2,912 acres of 2,912 total National Forest acres.

Mining - The area is withdrawn from mineral entry because it's within the Galupuro Wilderness.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries located here. There are no mining claims here. The south end was explored, but there are no records of production.

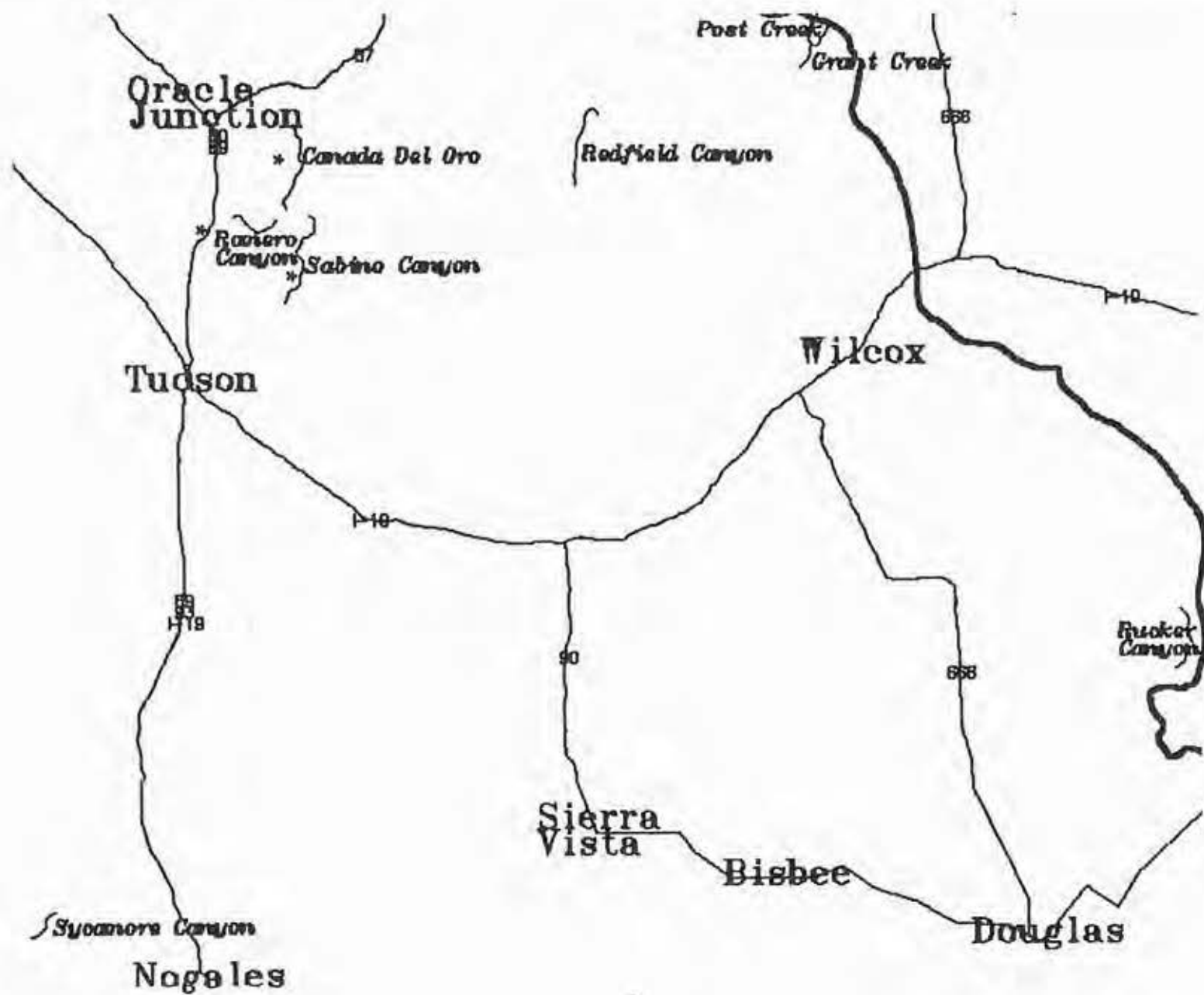
Special Land Uses - There are no special land use permits here.

Livestock Grazing and Agriculture - The entire watershed (on forest) is closed to grazing, in order to help protect the headwaters of streams with Threatened and Endangered fish species.

Timber Harvest - None of the corridor is identified as suitable for harvest (there is no ASQ). The segment is entirely within the Galupuro Wilderness, therefore there are no future plans to harvest.

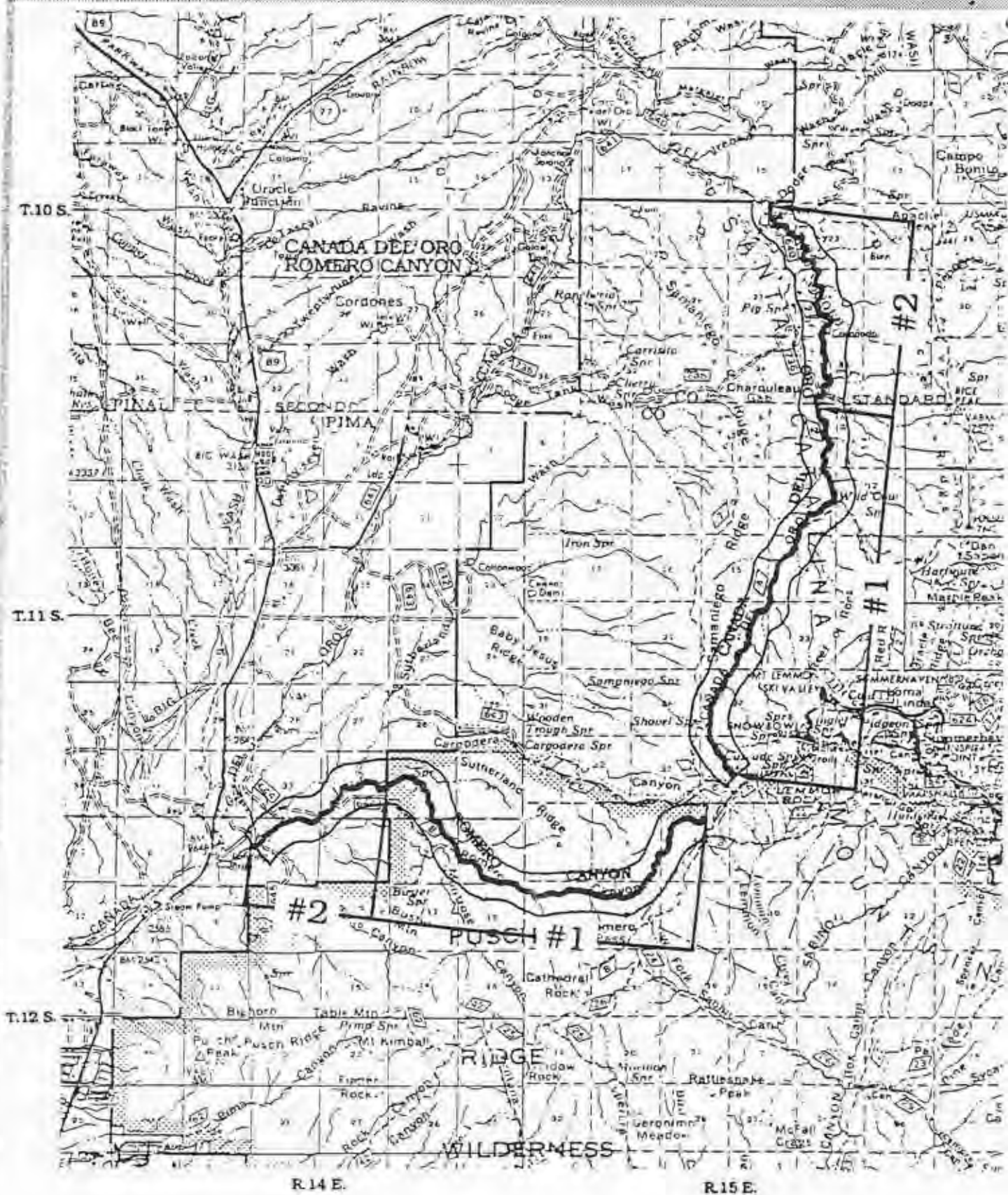
SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Redington, Mammoth, San Manuel, Oracle, Benson, Bisbee, and Wilcox, Arizona. Other users include individuals from urban centers such as: Tucson and Phoenix, Arizona. The level of use (numbers of people) in this area is relatively small because of limited accessibility.



CANADA DEL ORO

CANADA DEL ORO



CANADA DEL ORO

LOCATION

Canada del Oro, segment 1 - Pima County // segment 2 - Pinal County, Coronado National Forest.

Canada del Oro originates high in the Santa Catalina Mountains, near the Pusch Ridge Wilderness Boundary. The channel system flows to the North then turns to a Southwesterly direction for approximately 35 miles, to the confluence with the Santa Cruz River.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 9.4 miles of Canada del Oro, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (Upper) - Canada del Oro
- 6.0 Miles
- from the headwaters to 1/4 mile south of Forest Road 736
- Segment 2 (Lower) - Canada del Oro
- 3.4 Miles
- from 1/4 mile south of Forest Road 736 to the Forest Boundary.

Eligibility:

Segment 1 (Upper) is free flowing and without impoundments or diversions.

Segment 2 (Lower) is free flowing and without significant impoundments or diversions. The flow is diverted at various places to provide water for livestock.

The outstandingly remarkable values include, but are not limited to:

Segment 1 (Upper) - Canada del Oro -- scenic.

Views of this segment are not compromised by evidence of roads or other facilities. Because of the northerly aspect, vegetation composition is rich in diversity of species (mixed conifer forest to oak woodland) and spatial arrangement. The perennial stream and variety of vegetation along the stream corridor provide good habitat for a variety of wildlife (hummingbirds, warblers, woodpeckers, goshawk, mountain lion, racoon...). Distant views of nearby mountain ranges, valleys, rock cliffs, and Pusch Ridge are available from ridges above the drainage. Relatively low levels of use provide opportunities for solitude and wildlife watching. The Canada del Oro Trail is used by mountain bike riders.

Segment 2 (Lower) - Canada del Oro -- scenic.

Outstanding views exist of the vegetation (from oak woodland to upper Sonoran desert) and of the nearby cliffs. Charouleau Gap road #736 follows the streambed, within and parallel to the wash, for approximately 2 miles and crosses the drainage several times. This road is popular with OHV enthusiasts. Several other roads (#'s 736, 4486, 4491, 4488) leaving the channel corridor are used by OHV recreationists.

Classification:

Segment 1 (Upper) -- Wild.

Segment 2 (Lower) -- Recreational.

The total river corridor (1/4 mile on each side) includes 3,008 acres of which the Forest Service administers approximately 99.32 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Canada del Oro lies within the Catalina Core Complex, a regionally significant and structurally complex feature. Widespread metamorphism occurred throughout the Santa Catalina Mountains as large-scale transport of younger rocks over older rocks occurred. "Mylonitic" structure can be seen in many of the metamorphosed rocks in the area, meaning the minerals were stretched as they underwent metamorphism and transport, giving them a distinctive appearance.

Canada del Oro, in its headwaters, lies within the Tertiary Catalina granitic pluton. It progresses northward into the middle Proterozoic Oracle/Ruin granite suite, and on into the Proterozoic Apache Group and Troy Quartzite. Approaching the northernmost portion of the river which has been nominated for special status, the Canada enters a section of Paleozoic strata. The northernmost four miles of this segment lie within a syncline, a type of fold which produces valley features, which later can be overprinted by other structural events. Faulting divides the Proterozoic Apache Group/Troy Quartzite from the Paleozoic rocks.

Streamflow and Water Quality - Streamflow: Intermittent, with perennial reaches. There is no available data to estimate median or duration of flows for either segment. Water Quality: Limited data (pH and temperature) indicated satisfactory conditions to stock Gila topminnows in 1984. Analysis of inorganics and metals, in 1992, indicate that the state water quality standards were met. Samples were taken from Segment 2, but are believed to be representative of both Segments 1 and 2.

Vegetation - TES SPECIES: Notholaena lemonii (Lemon cloak fern), and habitat for Allium gooddingii (Goodding's onion) are found here.

The landscape surrounding Segment 1 is dominated by three plant communities which are: Douglas-fir/White fir, Pine, and Madroan Evergreen Woodland. The channel consists of the following plant community (Brown-Lowe): 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

The landscape surrounding Segment 2 is dominated by two plant communities which are: Madroan Evergreen Woodland and Interior Chapparal. The channel consists of the following plant community (Brown-Lowe): 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

Fisheries and Wildlife - GAME SPECIES: black bear, white-tailed deer, mule deer, mountain lion, javelina, and wild turkey are found here.

TES SPECIES: Mexican spotted owl, northern goshawk, peregrine falcon, Bell's vireo, northern beardless-tyrannulet, yellow-billed cuckoo, zone-tailed hawk, and desert tortoise are all found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species. The bog area is particularly unique and full of birds and flowers.

Visual Resources - This canyon has long been a favorite of off road enthusiasts for its magnificent and rugged character. A trek along this north flowing creek reveals the true diversity of a riparian environment. Clusters of sycamores and ash trees congregate around small pools and waterfalls while palo verde trees and cactus cling to the hillsides. Upper reaches of the watershed are located in mixed conifer and hikers often glimpse expansive views and striking sunsets from the many trails in the canyon. Because of the northerly aspect, vegetation composition is rich in diversity of species (mixed conifer forest, oak woodland to upper Sonoran desert) and spatial arrangement. Outstandingly remarkable views exist of the vegetation and of the nearby cliffs.

Cultural and Historical Resources - Segment 1 - There are no known sites in this segment.

Segment 2 - Three historic sites are known within this stream segment. All relate to mining within the Oracle mining district. Production was never great, but the district did become associated with one of the Southwest's lost mine legends, that of the "Mine with the Iron Door." The association came about through Harold Bell Wright's novel about the Iron Door Mine. Wright is said to have written the novel at Coronado Camp, one of the sites recorded in this stream segment. The association with Wright has not been conclusively established. The remaining sites consist of an arrastre and mine adits of undetermined age.

Air Quality - Air quality data collected in the area indicates that Canada del Oro is on the edge of several National Ambient Air Quality Standard (NAAQS) non-attainment areas. They are the San Manuel non-attainment area for sulphur dioxide, the Tucson non-attainment area for carbon-monoxide, and the Pinalito non-attainment area for PM-10 (Particulate Matter less than 10 microns).

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are a few private parcels located within Segment 2. The river corridor in Segment 1 is 6.0 miles long and contains 1,920 acres and in Segment 2 is 3.4 miles long and contains 1,088 acres. Acres of private land within the corridor totals 20.66, these acres are located in T10S R15E Section 22.

Water Rights and Water Resource Developments - There are no known water resource developments existing in Segment 1. Several small diversions for livestock and wildlife uses exist in Segment 2. These have negligible effect on the freeflowing character of the stream. All known developments are entered in the Santa Cruz River Adjudication.

Transportation Facilities - Segment 1: From FR 736, the Canada del Oro Trail #4 heads up canyon beside the creek (the first 2 miles of the trail is Trail #2). Trail #4 leaves the canyon about one mile from the head of Canada del Oro. From the south, access to the headwaters of the Canada del Oro are accessible via trail only. From the top of Mt Lemmon, access is via the Mount Lemmon Trail #5 and the Sutherland Trail #6 to the Canada del Oro Trail Junction,

Segment 2: From the north, vehicle access is by FR736 (Charouveau Gap) and from the south, vehicle access is by FR640 (Burney Hills) off of AZ 77 (the road to Oracle). FR736 and FR640 are basically 4wd roads and access is limited during precipitation runoff periods. They pass through pieces of State and private property.

Recreation Activities - The activities that occur along these segments of Canada del Oro are those associated with trails (Segment 1) and back roads (Segment 2) discovery; hiking, riding, viewing scenery and wildlife, backpacking, picnicking, camping, and exploring (total use approximately 4MRVD) occur along both segments.

Current Special Management Designations - The corridor has no special designations within either segment.

Mining - There are no mineral withdrawal acres here.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries in either segment. There are 129 mining claims.

Special Land Uses - There are no special land use permits here.

Livestock Grazing and Agriculture - The upper portion of Canada del Oro is in an area closed to grazing. The lower portion of the channel does flow through the Canada del Oro Grazing Allotment. The river channel is a very significant part of the current grazing capacity within the lower portion of the allotment. Corrals, fences, and other range improvements are located in the proposed corridor.

Timber Harvest - There is no ASQ, since none of the corridor is identified as suitable for harvest. There are no future plans to harvest within the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Oracle, San Manuel, Mammoth, Redington, Catalina, Oracle Jct., Redrock, Marana, and Tucson, Arizona. Other users include individuals from urban centers such as: Phoenix, Arizona. The level of use (number of people) is moderate.

ROMERO CANYON

ROMERO CANYON



ROMERO CANYON

LOCATION

Romero Canyon (both segments) are within Pima County, Coronado National Forest.

Romero Canyon originates high in the Santa Catalina Mountains, within the Pusch Ridge Wilderness. The channel system flows in a Westerly direction for approximately 8.3 miles, to the confluence with Canada del Oro.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 8.3 miles of Romero Canyon, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (Upper) - Romero Canyon
- 6.1 Miles
- from the headwaters to the Wilderness Boundary

- Segment 2 (Lower) - Romero Canyon
- 2.2 Miles
- from the Wilderness Boundary to the confluence with Canada del Oro.

Eligibility:

Romero Canyon (both segments) are freeflowing and without significant impoundments or diversions. There are several small diversions for wildlife uses within Segment 1.

The outstandingly remarkable values include, but are not limited to:

Segment 1 (Upper) - Romero Canyon -- scenic, recreational, wildlife.

This segment is a winding canyon filled with big boulders colored beige. The segment is in the Pusch Ridge Wilderness and views up-canyon are not compromised by evidence of roads or other facilities. Water in Romero Pools attracts people interested in viewing wildlife and riparian vegetation, camping and picnicking, partying and water play. Species diversity and variety of communities of both vegetation and associated wildlife are notable. Desert bighorn sheep may be seen above cliffs viewed from Romero Trail.

Segment 2 (Lower) - Romero Canyon -- recreational.

Access to this portion of Romero Canyon is provided by Romero Ruin Trail from Catalina State Park. A Park road, approximately 1/4 mile away, provides access to the lower canyon. A trail leading to prehistoric cultural resources provides access to an education oriented form of recreation. When water is present, the lower six miles are heavily used for water play.

Classification:

- Segment 1 (Upper) - Romero Canyon -- Wild.
- Segment 2 (Lower) - Romero Canyon -- Recreational.

The total river corridor (1/4 mile on each side) includes 2,656 acres of which the Forest Service administers 100 per cent, including Catalina State Park.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Romero Canyon lies within the Catalina Core Complex, a regionally significant and structurally complex feature. Widespread metamorphism occurred throughout the Santa Catalina Mountains as large-scale transport of younger rocks over older rocks occurred. "Mylonitic" structure can be seen in many of the metamorphosed rocks in the area, meaning that the minerals were stretched as they underwent metamorphism and transport, giving them a distinctive appearance.

The canyon falls within an Eocene two-mica granite. As the canyon turns west, portions of the granite which have been metamorphosed display this mylonitic texture.

Streamflow and Water Quality - Streamflow: The flow is intermittent within either segment. There is no data available to estimate median or duration of flows for either Segment 1 or 2. Water Quality: Analysis of inorganics and metals, in 1991, indicate that the state water quality standards were met. These samples were taken in Segment 2, but are believed to be representative of both segments.

Vegetation - There are no known locations for TES plants here.

The landscape which surrounds Segment 1 is dominated by three plant communities which are: Pine, Madroan Evergreen Woodland, and Desert Scrub Grassland. The channel can be classified (Brown-Lowe) as: 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

The landscape that surrounds Segment 2 is dominated by two plant communities which are: Desert Scrub Grassland and Mixed Paloverde-Cacti communities. The channel can be classified as: 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

Fisheries and Wildlife - GAME SPECIES: black bear, white-tailed deer, mule deer, mountain lion, javelina, and bighorn sheep are found here.

TES SPECIES: desert tortoise, buff-collared nightjar, Bell's vireo, and the northern beardless-tyrannulet are all found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species. The deep pools remaining even in the hottest summer months provide habitat for frogs and riparian relief to animals in stark contrast to the surrounding desert. In Segment 1, Desert bighorn sheep may be seen above cliffs viewed from Romero Trail.

Visual Resources - Segments 1 & 2 - Craggy hillsides and steep canyon walls characterize this westerly flowing intermittent stream. The landscape, in the lower elevations, is characterized by dominating line forms of saguaros and ocotillos along the hillsides and rough textures of thorny mesquite and paloverde trees along the canyon bottom. The aspect of the canyon produces great variety in plant types and patterns on the hillsides. Splashing pools and delicate waterfalls thread along the canyon bottom and sustain small patches of riparian habitats. Arizona Highways Magazine often features a dramatic, panoramic view of Romero Canyon from State Highway 89. Within Segment 1, the winding canyon is filled with big boulders colored beige. Also, the views up-canyon are not compromised by evidence of roads or other facilities.

Cultural and Historical Resources - Segment 1 (Headwaters to Wilderness boundary) - This stream segment is uninventoried, therefore, no cultural resources are recorded.

Segment 2 (Wilderness boundary to Canada del Oro confluence) - This stream segment is mostly uninventoried, and no cultural resources are recorded. A short segment, from the Catalina State Park boundary to the Canada del Oro confluence, is within the Sutherland Wash Archaeological District, listed on the National Register of Historic Places. This district contains a complex of Hohokam archeological sites (ca. A.D. 500-1350). Two of the archaeological district's sites are located along this segment.

Air Quality - Air quality data collected in the area indicate that the canyon is on the edge of several NAAQS (National Ambient Air Quality Standards) non-attainment areas. The non-attainment areas are: the San Manuel area for sulphur dioxide, the Tucson area for carbon-monoxide, and the Billito area for PM-10 (Particulate Matter less than 10 microns).

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located here. The river corridor in Segment 1 is 6.1 miles long and contains 1,932 acres and in Segment 2 the corridor is 2.2 miles long and contains 704 acres. Both segments are on National Forest lands.

Water Rights and Water Resource Developments - There are several small diversions for wildlife uses within Segment 1. These diversions have negligible effect on the freeflowing character of the stream. There are no known water resource developments in Segment 2. All known developments are entered in the Santa Cruz River Adjudication.

Transportation Facilities - Segment 1: From the east, access is from the trailhead at Catalina State Park. From the Park, the Romero Trail #8 follows the canyon and creek for about one mile before leaving to follow the ridge up to Romero Pass. The canyon heads east and north to its head with only trail access to it. From the top of Mt Lemmon, access is via the Mount Lemmon Trail #5.

Segment 2: Catalina State Park is accessed by vehicle from State Highway #89. Forest Road #644 runs through the Park to a trailhead at the Wilderness Boundary. The road is an all weather access open year round (entry fee required).

Recreation Activities - Segment 1: The activities that occur in the canyon are those associated along trails within wilderness areas: hiking, walking, horse riding, and day use (total use approximately 2MRVD). Water in Romero Pools attracts people interested in viewing wildlife and riparian vegetation, camping and picnicking, partying and water play.

Segment 2: Catalina State Park provides picnicking and day use opportunities. A trail leading to prehistoric cultural resources provides access to an education oriented form of recreation. When water is present, the lower segment is heavily used for water play.

When water is present, the canyon provides a unique opportunity for recreational activities here in southeastern Arizona.

Current Special Management Designations - Segment 1 (Upper) - The corridor is within the Pusch Ridge Wilderness and includes 6.1 miles and 1,952 acres of 1,952 National Forest acres. Segment 2 (Lower) - The corridor is within Catalina State Park (which is part of the National Forest) and includes 2.2 miles and 704 acres.

Mining - The following areas have mineral withdrawals:

Segment 1 - This segment is withdrawn from mineral entry because it's within the Pusch Ridge Wilderness.

Segment 2 - This segment is withdrawn from mineral entry by legislation (Arizona - Idaho Conservation Act of 1988).

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries in either segment. There are no mining claims in either segment.

Special Land Uses - Special land uses authorized in this corridor are:

Segment 1: None.

Segment 2:

T11S R14E Section 34 - Catalina State Park - recreation area.

T11S R14E Section 33 & 34 and T12S R14E Section 3 & 4 - Acquired land subject to outstanding rights.

Livestock Grazing and Agriculture - Segment 1 - (Upper) Romero Canyon - entire segment is within the Pusch Ridge Wilderness and is closed to livestock grazing. Segment 2 - (Lower) Romero Canyon - this segment is within Catalina State Park. Grazing has not been approved in the Park permit, nor has grazing been addressed in the Catalina State Park management plan.

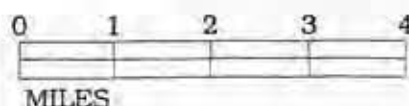
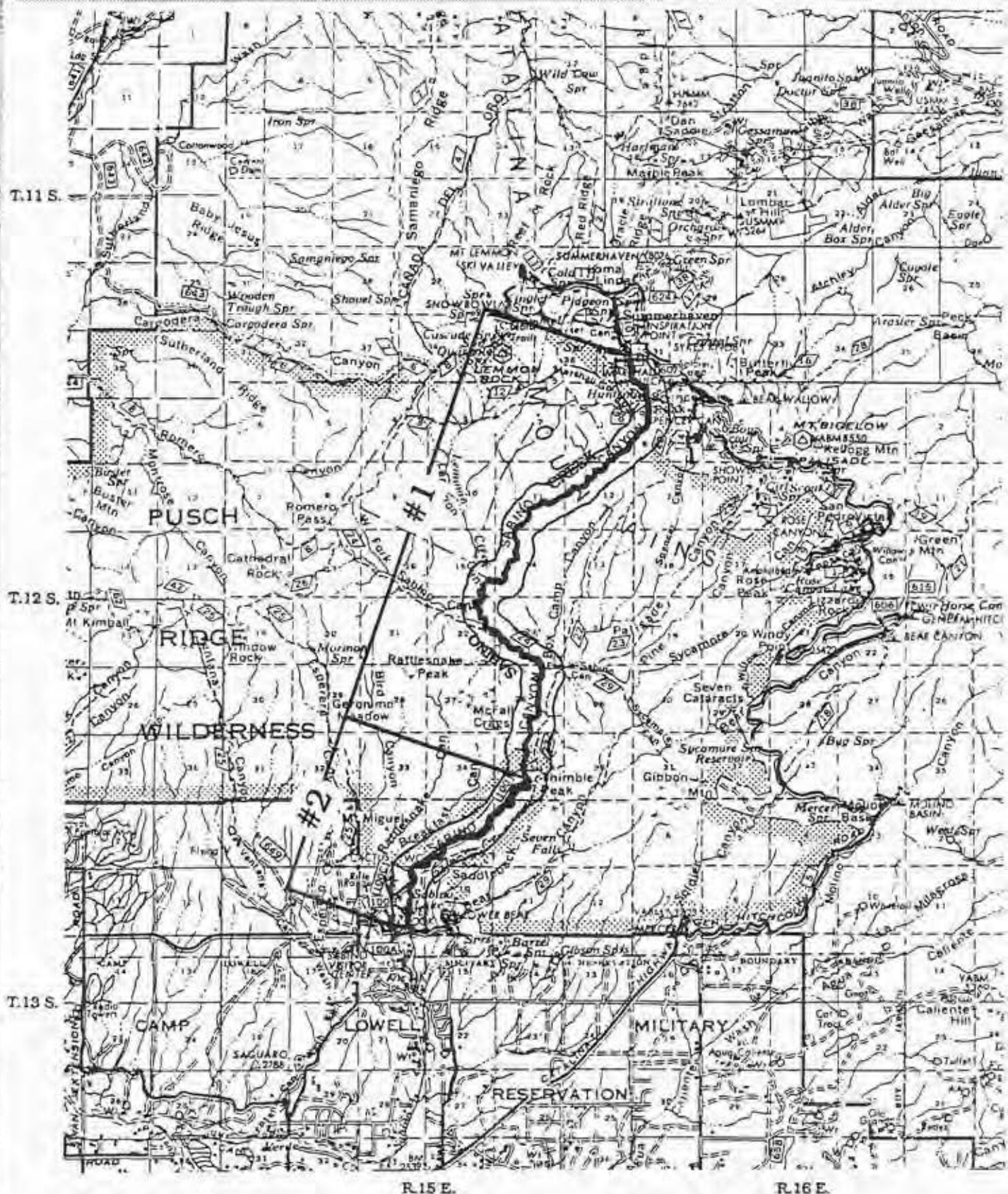
Timber Harvest - There is no ASQ, since none of the corridor is identified as suitable for harvest. There are no plans to harvest in the future.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Oro Valley, Marana, Red Rock, Catalina, Oracle Jct., San Manuel, Mammoth, Oracle, and Tucson, Arizona. Other users include individuals from urban centers such as: Phoenix, Arizona. The level of use (number of people) is light for Segment 1, with moderate use in Segment 2.

SABINO CREEK

SABINO CREEK



SABINO CREEK

LOCATION

Sabino Creek (both segments) are within Pima County, Coronado National Forest.

Sabino Creek originates high in the Santa Catalina Mountains (near Summerhaven). The channel system flows in a Southerly direction for approximately 17 miles, to the confluence with Tanque Verde Creek.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 12 miles of Sabino Creek, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (Upper) - Sabino Creek
- 8.0 Miles
- from Marshall Gulch recreation area to the Wilderness (Sabino Canyon recreation area) Boundary.
- Segment 2 (Lower) - Sabino Creek
- 3.2 Miles
- from the Wilderness (Sabino Canyon recreation area) Boundary to the Forest Boundary.

Eligibility:

Segment 1 (Upper) is freeflowing and without impoundments or diversions.

Segment 2 (Lower) is freeflowing and without significant impoundments or diversions. The lower segment is impounded by a dam. The dam is approximately 1/2 mile north of the Forest Boundary.

The outstandingly remarkable values include, but are not limited to:

Segment 1 (Upper) - Sabino Creek -- scenic, recreational, wildlife.

Trails access this portion of the Puach Ridge Wilderness and provide the most popular summer hiking opportunities in the Santa Catalina Mountains. The beauty and recreation opportunities are equal to those in the lower segment of Sabino Canyon. However, the extent and variety of vegetation, and therefore wildlife, exceeds that found outside the wilderness.

Segment 2 (Lower) - Sabino Creek -- scenic, recreational, wildlife, and historic.

The beauty of the river canyon has an international reputation and is one of the most visited in the state. This river has pools that provide almost year-round water based recreation. The recreation area is rich in cultural resources. The river, the riparian area and the prehistoric heritage are the focus of several environmental education programs which are attended by about 15,000 people each year. A paved road runs parallel to the Canyon for approximately 4 miles. This road is used to transport visitors in shuttle buses, by bicyclists, and as a pedestrian trail (hiking/walking).

Classification:

Segment 1 (Upper) -- Wild.

Segment 2 (Lower) -- Recreational.

The total river corridor (1/4 mile on each side) includes 3,584 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Sabino Creek lies within the Catalina Core Complex, a regionally significant and structurally complex feature. Widespread metamorphism occurred throughout the Santa Catalina Mountains as large-scale transport of younger rocks over older rocks occurred. "Mylonitic" structure can be seen in many of the metamorphosed rocks in the area, meaning that the minerals were stretched as they underwent metamorphism and transport, giving them a distinctive appearance.

The creek flows through Tertiary and Proterozoic (Precambrian) granites, the southernmost five miles of which have been metamorphosed and display this mylonitic texture. In its uppermost reaches, the channel is composed of Upper Cretaceous Leatherwood quartz diorite.

Streamflow and Water Quality - Streamflow: The upper reach of Segment 1 is perennial, in most years. The median annual flow is (about) 0.33 cfs (data collected by a USGS gage from 1951-1959 and a USDA Forest Service gage from 1982 to present). The lower reach of Segment 1, from about the confluence with West Fork Sabino Creek, and all of Segment 2 has an intermittent flow. The duration of this flow is displayed in the following table:

Discharge, in CFS, Which Was Equalled or Exceeded for Indicated % of Time													
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	
139	48	26	15	9.8	4.1	1.8	0.73	0.24	0.05	0.02	0.01	0.00	

(From USGS Water-Resources Investigations Report 91-4041)

Water Quality: Analysis of inorganics and metals, in 1991 and 1992, indicate that the state water quality standards were met, for both segments.

Vegetation - There are no known locations for TES plants here.

The landscape that surrounds Segment 1 consists of three plant communities which are: Pine, Madrean Evergreen Woodland, and Desert Scrub Grassland. The channel has been classified (Brown-Lowe) as: 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

The landscape that surrounds Segment 2 consists of two plant communities which are: Desert Scrub Grassland and Mixed Paloverde-Cacti communities. The channel has been classified (Brown-Lowe) as: 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

Fisheries and Wildlife - GAME SPECIES: black bear, white-tailed deer, mule deer, mountain lion, javelina, bighorn sheep, wild turkey, and brown trout are found here.

TES SPECIES: Mexican spotted owl, peregrine falcon, northern goshawk, Bell's vireo, northern beardless-tyrannulet, yellow-billed cuckoo, zone-tailed hawk, green-backed heron, belted kingfisher, Gila chub, and the desert tortoise are all found here.

The rugged and varied slopes of Sabino Canyon provide habitat for a tremendous variety of birds, mammals and reptiles. Coatiundi, ringtail cats, a number of rare birds, whipanakes and the desert tortoise reflect some of this diversity.

Visual Resources - A million visitors a year experience the awe and wonder called Sabino Creek. Towering canyon hillsides and jutting cliffs create a dramatic sense of enclosure for visitors hiking, biking or riding the tram. The dense riparian tree canopy is interrupted by cactus, mesquite and ocotillo from the canyon hillsides. The Acropolis and Thimble Peak describe the spectacular cliffs and formations that stand sentinel along the canyon rim. Sunlight dances along the stream creating dynamic shade patterns and sears off the canyon hillside vegetation silhouetting shapes of trees and cactus. The beauty of the canyon has an international reputation, one that constitutes an outstandingly remarkable value.

Cultural and Historical Resources - Segment 1 (Marshall Gulch recreation site to Sabino Canyon Recreation area) - This stream segment is uninventoried, therefore, no cultural resources are recorded.

Segment 2 (Wilderness boundary to Forest boundary) - Seventeen sites have been recorded along this stream segment. Prehistoric sites include rockshelters, bedrock mortars, sherd and lithic scatters and permanent habitation sites. Artifacts and sites range in age from Late Archaic (ca. 1500 B.C.- A.D. 300) to historic-period Piman. There is an exceptional complex of Hohokam sites representing agriculture, habitation, and the collection of mesquite, cactus fruit, and other wild resources. These prehistoric sites are potentially eligible for the National Register of Historic Places.

Historic sites consist primarily of Depression-era administrative and recreation facilities. The CCC-constructed Lowell Ranger Station, nominated to the National Register, is located along this segment. Masonry bridges across Sabino Creek were built by the Works Progress Administration, another important relief agency of the Depression era.

The concentration of prehistoric and historic resources along Sabino Creek (Segment 2) constitute an outstandingly remarkable value of this stream segment.

Air Quality - The air quality recorded at the Saguaro National Monument, which is nearby, indicate that SO₂, ozone, and PM-10 (particulate matter less than 10 microns) have not exceeded standards. At a nearby station in Tucson, carbon monoxide was exceeded once, but has been in compliance for the past ten years.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located here. The river corridor: Segment 1 is 8.0 miles long and contains 2,560 acres; Segment 2 is 3.2 miles long and contains 1,024 acres.

Water Rights and Water Resource Developments - Numerous diversions for domestic use exist upstream from Segment 1. These have an influence on the timing and amount of flow into Segment 1 in most years. They do not have an effect on the freeflowing character of the channel within the segment. They have even less influence in Segment 2, and may not be noticeable. The lower segment (Segment 2) is impounded by a dam. This dam is not considered significant to the freeflowing nature of the channel. There are no known diversions from Sabino Creek within either segment. All known developments from the upstream portion are entered in the Santa Cruz River Adjudication.

Transportation Facilities - Segment 1: This segment is accessed by the Sabino Canyon Trail #23 and the West Fork Trail #24 from the end of the shuttle road. The shuttle road is within the Sabino Canyon Recreational Area, which is in Segment 2. Segment 1 has no developed access. However, the upper end of the described segment starts at Marshall Gulch PG with associated parking areas and trails. The Marshall Gulch Trail #3, the Aspen Trail #93, and the Sunset Rock Trail #90 all start from the Marshall Gulch PG and immediately head up the east and west slopes out of the canyon.

Segment 2: Vehicle access is from the parking lot (capacity 460 vehicles) at the Sabino Canyon Visitor Center. From there, the segment is accessed by the Sabino Dam Trail #30 and the Phone Line Trail #27 or public transportation (shuttle which runs to the end of the paved road).

Recreation Activities - Segment 1: The activities that occur in this segment are those associated along canyon trails within wilderness areas, such as; hiking, walking, horseback riding, wildlife viewing and water play.

Segment 2: There are a variety of recreation developments and activities that occur along various portions of the creek including trails (and trail activities); picnic areas with day use; and the public transportation system. Walking, jogging, hiking, viewing scenery and wildlife, sunning, and shuttle riding, are prominent uses. Capacity of the developed sites is 610 PAOT day use (total use approximately 625MRVD).

The canyon (both segments) is known nationally and internationally for it's recreational opportunities.

Current Special Management Designations - Segment 1 (Upper) - The corridor is (mostly) within the Pusch Ridge Wilderness and includes 7.5 miles of channel (of the 8 mile segment) and 2,400 acres of the 2,560 acres of total National Forest land within the corridor.

Segment 2 - There are no special management designations here.

Mining - The following areas have mineral withdrawals:

Segment 1 - This segment is withdrawn from mineral entry because it's within the Pusch Ridge Wilderness.

Segment 2 -

T12S R15E Section 35 - Sabino-Bear Canyon Recreation Area;
T13S R15E Section 9 - Sabino-Bear Canyon Recreation Area;
T13S R15E Section 9 - Sabino-Bear Canyon Administration Site.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries, in either segment. There is 1 (one) mining claim in the area.

Special Land Uses - A variety of facilities, including public utilities are located as follows:

Segment 1:

T11S R16E Section 31 - Stanley Coulthard Road Right-of-Way - dirt road.
" " " " - Soldier Camp Recreational Residence Area - 51 private residences.
" " " " - Pima County Solid Waste Area - effluent discharge (spray).

T12S R16E Section 6 - Soldier Camp Permittee's Assn. Water Transmission - underground pipeline.
" " " " - Trico Electric Coop Transmission Line - overhead powerline.
" " " " - Mountain States Telephone Company - overhead line.
" " " " - Az. Game & Fish Wildlife Water Supply - Soldier Lake

Segment 2:

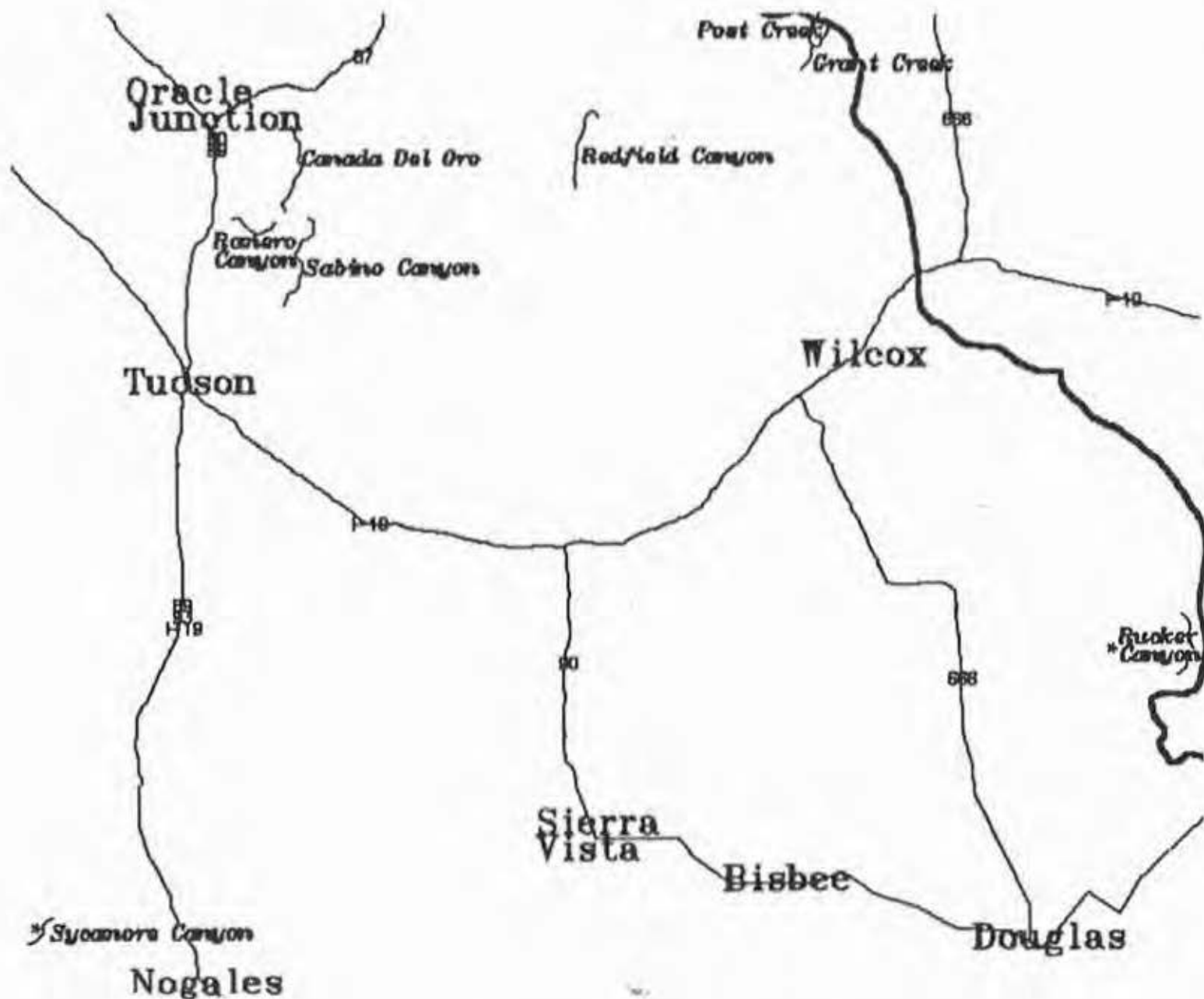
T13S R15E Section 9 - Tucson Gas & Electric - (mostly) underground line.
" " " " - Mountain States Telephone Company - underground line
" " " " - Sabino Canyon Tours, Inc. - public transportation tram

Livestock Grazing and Agriculture - Both segments are within an area that has been closed to grazing. The closure was to help riparian management and recreational opportunities.

Timber Harvest - There is no ASQ, since none of the corridor is identified as suitable for harvest. There are no plans for future harvests.

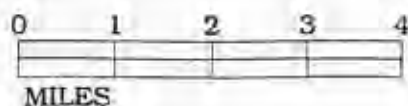
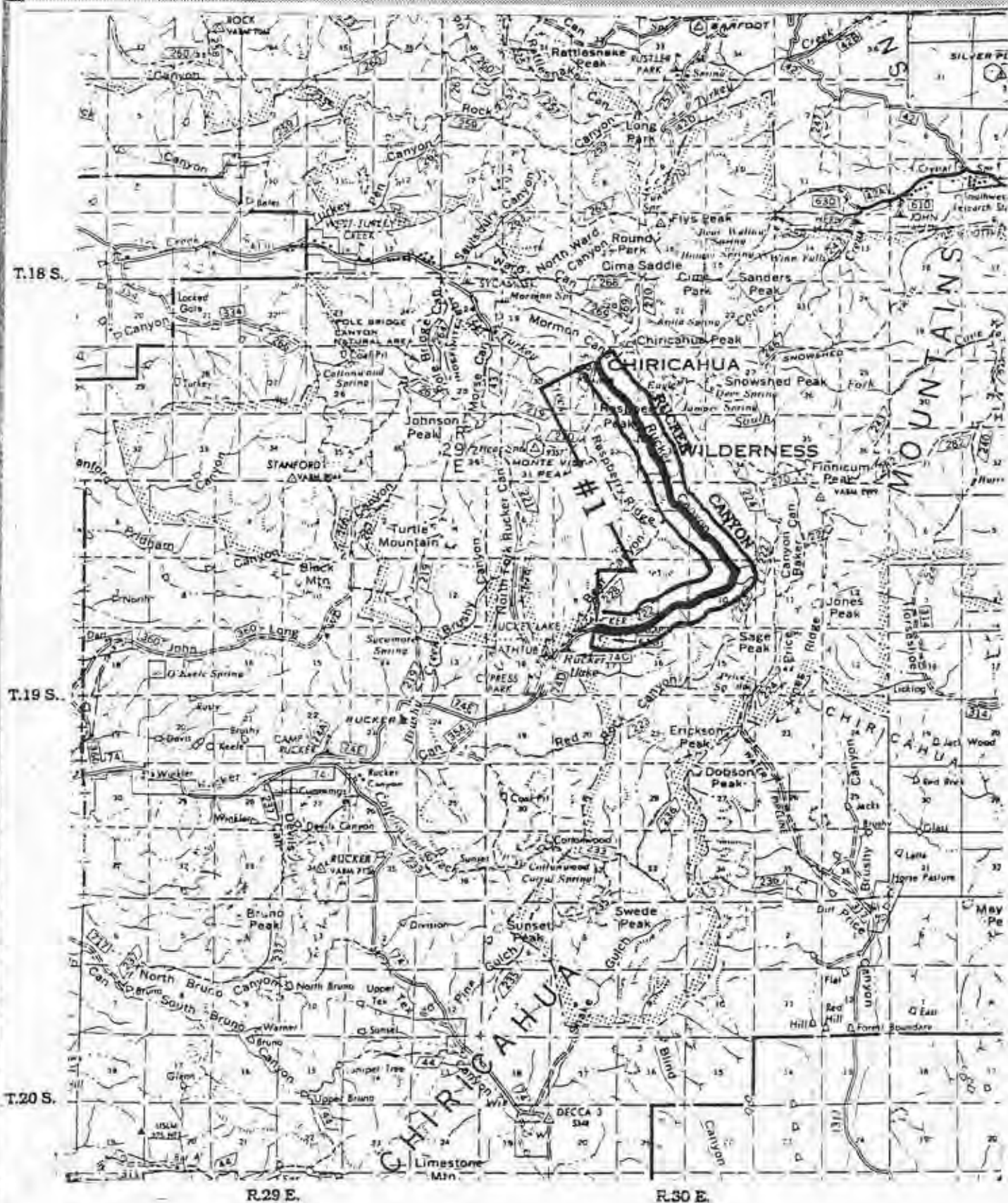
SOCIAL AND ECONOMIC VALUES

The local users are dominantly from Tucson, Arizona. Sabino Canyon is known nationally and internationally for it's scenic, wildlife and recreational opportunities. Sabino Creek is a source of water for Sabino Lake. Segment 2 (Lower) is one of the most visited areas in the state.



RUCKER CANYON

RUCKER CANYON



RUCKER CANYON

LOCATION

Rucker Canyon, Cochise County, Coronado National Forest.

Rucker Canyon originates high in the Chiricahua Mountains (near Chiricahua Peak). The channel system flows in a Southeasterly to a Westerly direction for approximately 15 miles, to the confluence with Whitewater Draw.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 14 miles of Rucker Canyon, from the headwaters to the Forest Boundary, were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (only one segment) - Rucker Canyon
- 5.9 Miles
- from the headwaters (within the Wilderness) to the Wilderness Boundary.

Eligibility:

This segment (Rucker Canyon) is freeflowing and without impoundments or diversions.

The outstandingly remarkable values include, but are not limited to:

Segment 1 - Rucker Canyon -- scenic, recreational, geologic.

This segment is in Wilderness. There is an easily reached (and frequently used) trail which follows the creek for about three miles before it heads up a deep and rugged canyon known for its scenic beauty and geology. This is a popular hiking area due to its easy accessibility and spectacular scenery along the creek and canyon.

Classification:

Segment 1 - Rucker Canyon -- Wild.

The total river corridor (1/4 mile on each side) includes 1,888 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Most of the nominated segment of Rucker Canyon lies within the Turkey Creek Caldera or its periphery. The caldera is made up of a series of Tertiary intrusives and extrusives, including a monzonite porphyry, the Rhyolite Canyon welded tuff, and rhyolite lavas. Unusual erosional patterns are common in welded tuffs, as less resistant minerals are removed by weathering.

The corridor lies within a deep and rugged canyon known for its geology.

Streamflow and Water Quality - Streamflow: The channel has an interrupted perennial flow. There is no data available to estimate median or duration of flows. Water Quality: Analysis of inorganics and metals, in 1992, indicate that state water quality standards were met. In addition, the ADEQ Arizona Water Quality Assessment for 1991 indicates no water quality violations from fecal coliform tests done in 1991.

Vegetation - TES SPECIES: Draba standleyi (Standley Whitlow-grass), Erigeron kuschel (Chiricahua fleabane), and habitat for Rumex orthoneurus (Chiricahua dock) are all found here.

The landscape surrounding the corridor consists of three plant communities which are: Pine, Mexican Oak/Pine and Quercus emoryi/Juniperus Associations. The channel has been classified (Brown-Lowe) as: 222.3 ROCKY MOUNTAIN RIPARIAN DECIDUOUS FOREST, 222.32 MIXED BROADLEAF SERIES and 223.22 MIXED BROADLEAF SERIES.

Fisheries and Wildlife - GAME SPECIES: black bear, mule deer, white-tailed deer, mountain lion, and javelina are found here.

TES SPECIES: Mexican spotted owl, elegant trogon, peregrine falcon and the Arizona shrew are found here. The Arizona stoneroller is known downstream from this segment.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species.

Visual Resources - The wide canyon setting offers expansive views of surrounding canyon walls and rock outcrops, diverse hillside and canyon bottom vegetation and mountain peaks within the wilderness above. The diversity of the mixed broadleaf riparian vegetation is a primary factor in the scenic quality of the area.

The segment is a deep and rugged canyon known for its scenic beauty.

Cultural and Historical Resources - This segment is uninventoried, therefore, no cultural or historical resources have been recorded.

Air Quality - Air quality at Chiricahua National Monument, a nearby air quality monitoring station, is good. It meets Class I air quality standards. Douglas and Paul Spur, nearby in the opposite direction, are PM-10 (Particulate Matter less than 10 microns) non-attainment areas for NAAQS (National Ambient Air Quality Standards). Visibility problems are often associated with PM-10 non-attainment areas.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located here. The river corridor is 5.9 miles long and contains 1,888 acres.

Water Rights and Water Resource Developments - There are no known diversions or developments within this segment. A small lake, Rucker Lake, lies just outside the corridor on the south end. The lake is formed behind a dam.

Transportation Facilities - Vehicle access is by Forest Road 74E from FR74 and State Highway 191. FR74E and FR74 are all weather roads open year round. They pass several FS developed sites and through pieces of private property. From Rucker Forest Camp CG, the Rucker Trail #222 follows Rucker Canyon and the creek for about two miles before leaving the creek. The upper reaches of the creek are accessible via the Raspberry Ridge Trail #228, which starts from the Rucker Forest CG also, and a portion of the Crest Trail #270 which crosses just above the head of Rucker Canyon.

Recreation Activities - Trail activities along the lower and upper segment of the creek are the only activities that occur. These include hiking, walking, horseback riding and water play. The total use of the area is approximately 5 MRVD.

The steep canyon setting of Rucker Lake (located just outside the corridor), nestled in the mixed conifer woodland, is notably the focal point of the canyon and the destination spot for thousands of visitors.

Current Special Management Designations - Segment 1 (Rucker Canyon) - The corridor is entirely within the Chiricahua Wilderness and includes 5.9 miles of channel and 1,888 acres of National Forest.

Mining - The following areas have mineral withdrawals:

The segment is withdrawn from mineral entry because it's within the Chiricahua Wilderness.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries, in the segment. There are no mining claims, within the segment.

Special Land Uses - There are no special land use permits here.

Livestock Grazing and Agriculture - The entire segment is within the Chiricahua Wilderness. The segment flows through the RAK Grazing Allotment. The area lacks grazing capacity, due to the rough terrain and limited access for livestock.

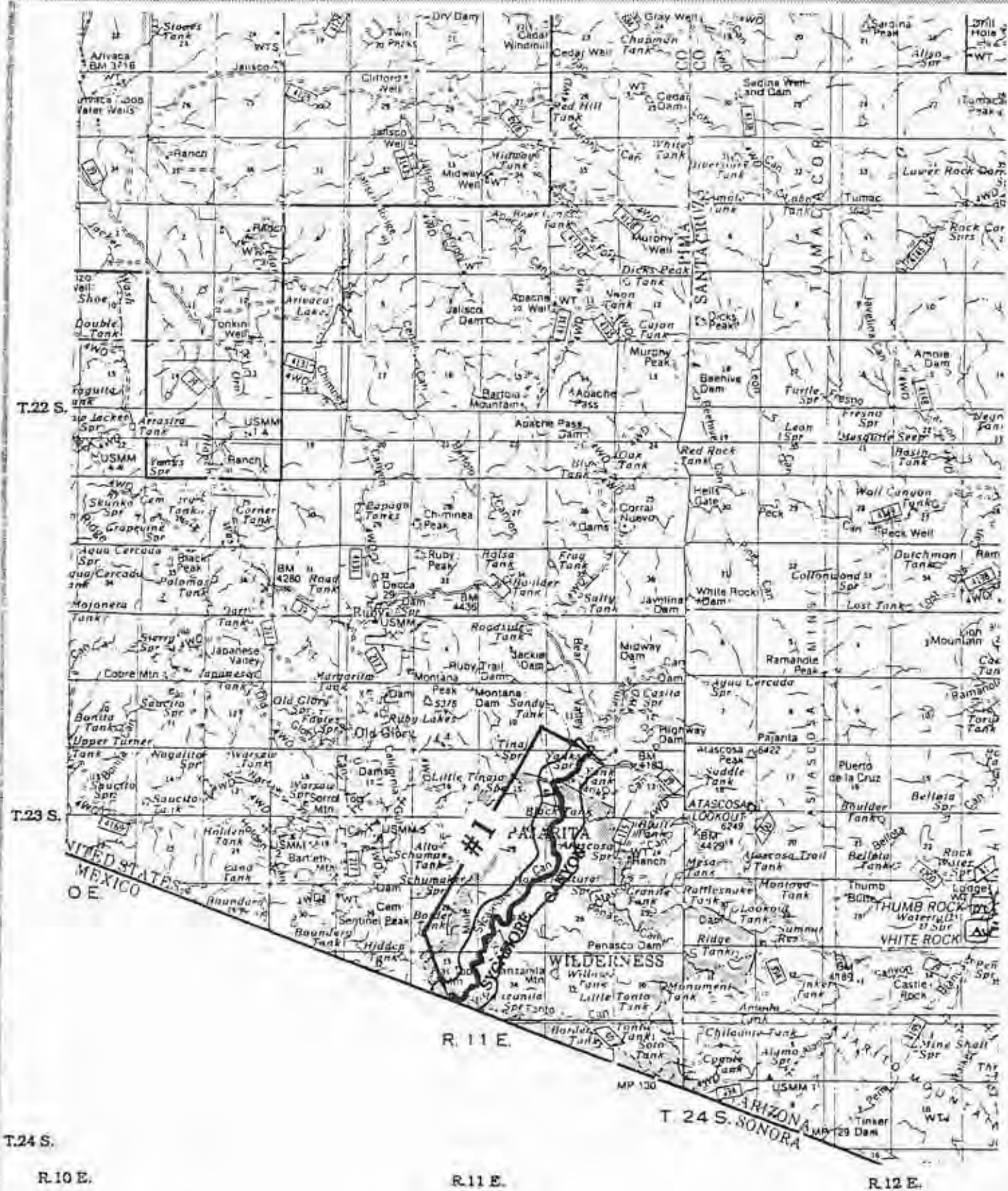
Timber Harvest - The corridor has not been identified as suitable for harvest. There is no ASQ within the segment. There are no plans for future fuelwood harvesting within the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Douglas, Bisbee, Tombstone, Willcox, Elfrida, Naco, Portal, Arizona, and Animas, New Mexico and Agua Prieta, Sonora, Mexico. Other users include individuals from urban centers such as: Tucson and Phoenix, Arizona. Rucker Canyon is a source of water for Rucker Lake. The level of use (numbers of people) in this segment is moderate. The use primarily consists of people hiking up the trail from Rucker Lake.

SYCAMORE CANYON

SYCAMORE CANYON



A horizontal number line with tick marks at 0, 1, 2, 3, and 4. The word "MILES" is written below the line.



SYCAMORE CANYON

LOCATION

Sycamore Canyon, Santa Cruz County, Coronado National Forest.

Sycamore Canyon originates within the Atascosa Mountains (near Atascosa Peak). The channel system flows in a Southerly direction for approximately 9 miles, to the United States/Mexico Border.

PRELIMINARY ELIGIBILITY AND CLASSIFICATION INFORMATION

Approximately 9 miles of Sycamore Canyon, from the headwaters to the Forest Boundary (U.S./Mexico Border), were evaluated for potential designation as a Wild and Scenic River.

Eligible Segments:

- Segment 1 (only one segment) - Sycamore Canyon
- 5.0 Miles - mostly within the Pajarita Wilderness/Goodding Research Natural Area.
- from Ruby road (Forest Road 39) to the U.S./Mexico Border.

Eligibility:

This segment (Sycamore Canyon) is freeflowing and without significant impoundments or diversions.

The outstandingly remarkable values include, but are not limited to:

Segment 1 - Sycamore Canyon -- recreational, fish/wildlife, and ecological.

Hikers generally start at Hank and Yank Ruins, as they traverse the channel they follow the stream, crossing and recrossing it via stepping stones and gravel bars. The stream is intermittent along the canyon bottom. As the channel meanders towards Mexico, pinnacles and sheer rock cliffs that form the canyon walls occasionally crowd the stream so that many pools are formed. A number of pools, in the inner reaches of the canyon, usually hold water year-round. The topography is extremely rough, for the most part consisting of the stream bottom with steep slopes and vertical cliffs. The vegetation is live oak savanna with a narrow, riparian hardwood type along the stream. The stream vegetation is characterized by Sycamore, Ash, Alder, Cottonwood, Willow and Desert Willow. The canyon supports a diverse plant and animal community. A portion of the area has been designated the Goodding Research Natural Area. Over 625 species of plants have been identified here, many of which are rare. Over 130 species of birds have been identified as frequent visitors to the canyon. Among these are the colorful Vermilion Flycatcher and various warblers, Coppery Tailed Trogon, Rose Throated Becard and others.

Classification:

Segment 1 - Sycamore Canyon -- Scenic.

The total river corridor (1/4 mile on each side) includes 1,500 acres of which the Forest Service administers 100 per cent.

DESCRIPTION OF RESOURCES AND VALUES

Geology - Miocene and Upper Oligocene extrusive rhyolite and rhyodacite make up the rocks seen within Sycamore Canyon. These occur as lava flows, welded tuffs, pyroclastic rocks, and some intercalated epiclastic rocks.

Streamflow and Water Quality - Streamflow: The channel has an interrupted perennial flow. There is no data available to estimate median or duration of flows. Water Quality: Analysis of inorganics and metals, in 1992, indicate that the state water quality standards were met.

Vegetation - TES SPECIES: *Dalea tentaculoides* (Gentry indigo bush), *Erigeron eriophyllus* (fleabane), *Graptopetalum bartonii* (Bartrem's stonecrop), *Agave parviflora* ssp. *parviflora* (Santa Cruz striped agave), *Fraxinus gooddingii* (Goodding's Ash), *Coryphantha recurvata* (Santa Cruz beehive cactus), *Phaseolus supinus*, *Desmanthus bicornutus*, *Amsonia grandiflora* (Large flowered blue star), and *Chiosya mollis* (Santa Cruz star leaf) are all found here.

The landscape surrounding the corridor is dominated by an Encinal Oak Community. The channel is classified (Brown-Lowe) as: 223.221 POPULUS FREMONTII-SALIX SPP. ASSOCIATION.

Fisheries and Wildlife - GAME SPECIES: white-tailed deer, mule deer, javelina, and mountain lion are found here.

TES SPECIES: Mexican spotted owl, peregrine falcon, Sonora chub, Mexican long tongued bat, elegant trogon, northern beardless-tyrannulet, thick billed kingbird, five-striped sparrow, rose throated becard, desert tortoise, mountain skink, vine snake, Tarahumara frog, Chiricahua leopard frog, and the great plains narrow-mouthed toad are all found here.

The great variety of habitat types provides for remarkable diversity and abundance of wildlife species including several rare and uncommon birds such as the elegant trogon, the unusual coatimundi and ringtail cats. Sycamore Canyon is the sole known location on the Forest for the rare Sonora chub, which survives parts of the year only in small stagnating pools. It is perhaps the last site where the Tarahumara frog, which has not been seen in the U.S. for many years, was found. It is also an area rich in floristic diversity. It is the only known location for Dalea (indigo bush) in the U.S.

Visual Resources - Riparian trees and shrubs cluster around pools and the stream edge along the entire length of this canyon. Its namesake belies the striking form of large trees that dominate the canyon bottom. The dramatic and rolling terrain of the Pajarito Wilderness area is incised by steep rugged canyon sides of Sycamore canyon.

Cultural and Historical Resources - Recorded sites in Sycamore Canyon consist of two rockshelters with prehistoric rock art, and Hank and Yank Ruins. The age and cultural affiliation of the rockshelter sites is unknown. Hank and Yank Ruins consists of the remnants of one adobe structure, three other structure foundations, and a sparse artifact scatter. It was the site of an 1886 skirmish between Anglo ranchers and Apaches.

Air Quality - The air quality at Nogales, Arizona, the nearest air quality monitoring station, does not meet NAAQS (National Ambient Air Quality Standards) for PM-10 (Particulate Matter less than 10 microns). Visibility problems are often associated with PM-10 non-attainment areas. Standards for other monitored elements of air quality (ozone, sulphur dioxide, carbon monoxide, NOx, and lead) are met. However, an intensive study (conducted by the Environmental Protection Agency, Arizona Department of Environmental Quality, and the nation of Mexico), of the air quality for this area is underway. The study was initiated because of suspicions about hazardous air conditions within the area.

LAND USES AND DEVELOPMENTS

Land Ownership - The river is located in the Coronado National Forest. There are no private parcels located in the corridor. The river corridor is 5.0 miles long and contains 1,600 acres of National Forest land.

Water Rights and Water Resource Developments - Several small diversions for livestock and wildlife use exist. They have an negligible effect on the freeflowing character of the stream.

Transportation Facilities - Vehicle access is limited to the Ruby Road (Forest Road 39), which is generally an all weather graded dirt road to the northern end of the river segment. From just south of the roadway, access to the Sycamore Canyon segment is by Sycamore Canyon Trail #40 which parallels the river segment, primarily through the Pajarito Wilderness area. Access to the southern end of the segment is by the Border Trail #45 off of FR39A.

Recreation Activities - Recreation use is primarily activities that result from the Sycamore Canyon Trail #40 and the Border Trail #45. Activities include hiking, riding, hunting, and wildlife viewing with some sightseeing and exploring. Use and numbers of people in this area is relatively small because of the limited accessibility (total use probably less than 1MRVD).

The area is known nationally for its outstandingly remarkable recreational opportunities. These opportunities are derived from the unique and diverse species of flora and fauna.

Current Special Management Designations - Segment 1 (Sycamore Canyon) - The corridor is (mostly) within the Pajarito Wilderness and Goodding Research Natural Area. The segment includes 4.4 miles of channel and 1,408 acres of the 5.0 miles and 1,600 acres of National Forest lands. Critical habitat has been designated for the Sonora chub within the segment. The critical habitat starts at Hank and Yank Spring and is designated at various locations between the spring and the Mexico/U.S. border.

Mining - The following areas have mineral withdrawals:

Most of this segment is withdrawn from mineral entry because it's within the Pajarita Wilderness. Also withdrawn from mineral entry: T23S R11E Section 14 within the Goodding Research Natural Area.

There are no oil or gas leases, no developed geothermal sites, no active mining operations or quarries, within the segment. There are 2 mining claims (1 in the Wilderness - staked in 1967). In the past, there was mineral activity (gold, silver and copper) in the Oro Blanco mining district, a few miles to the west.

Special Land Uses - There are no special land use permits here.

Livestock Grazing and Agriculture - This segment flows (mostly) through the Goodding Research Natural Area and Pajarita Wilderness. A small area, around Hank and Yank Spring, is within the Bear Valley Grazing Allotment. The rest of the corridor is not grazed. Efforts are currently underway to improve management on the Allotment.

Timber Harvest - None of the corridor is identified as suitable for harvest, therefore, there is no ASQ. There are no plans for future harvesting within the corridor.

SOCIAL AND ECONOMIC VALUES

The local users are from the communities of: Nogales, Patagonia, Sonoita, Tubac, Green Valley, and Arivaca, Arizona, and Nogales, Sonora, Mexico. Other users include individuals from urban centers such as: Tucson and Phoenix, Arizona. Sycamore Canyon runs south into Mexico. The level of use (numbers of people) in this area is relatively small because of limited accessibility.

