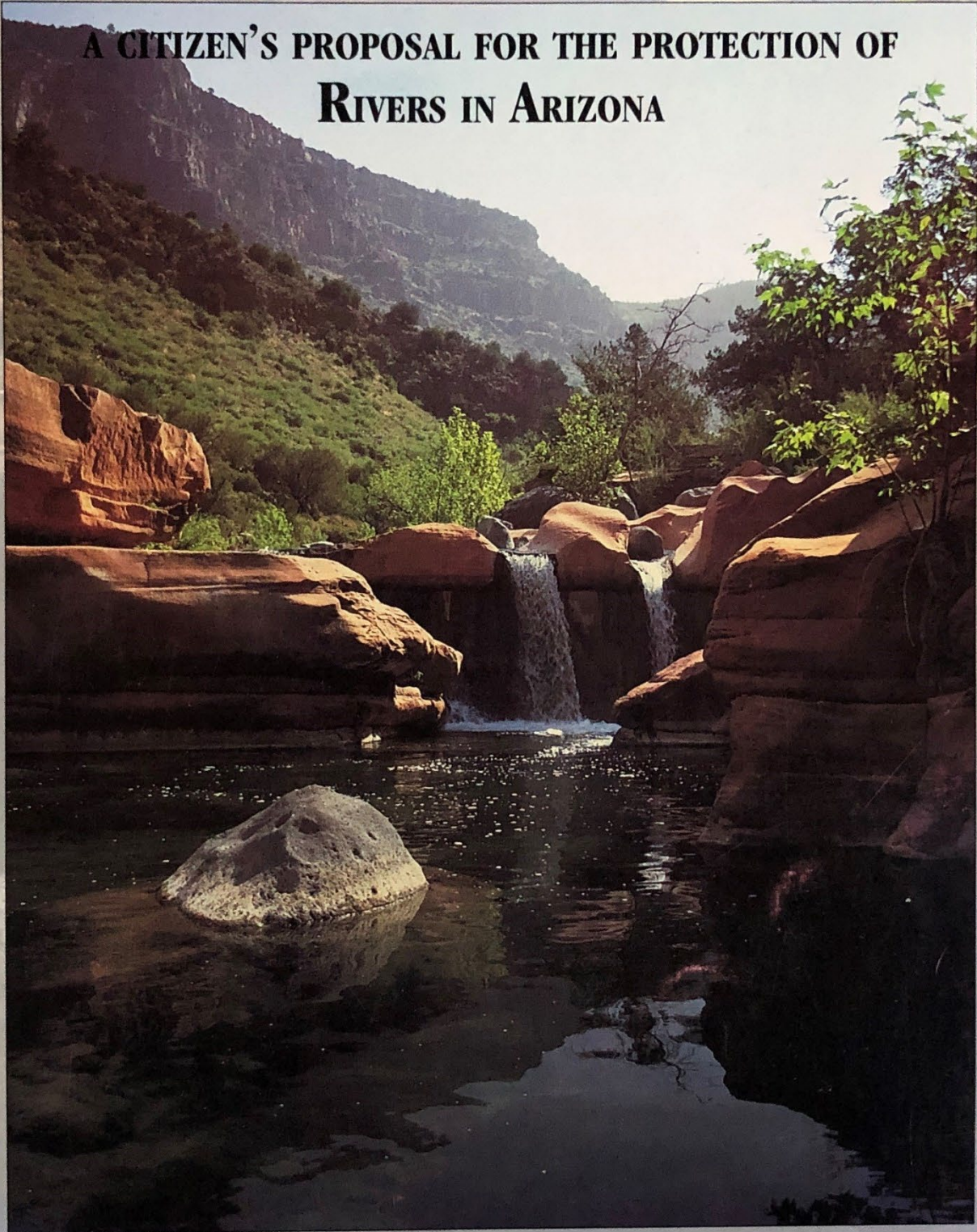


ARIZONA RIVERS

Lifeblood of the Desert

A CITIZEN'S PROPOSAL FOR THE PROTECTION OF
RIVERS IN ARIZONA



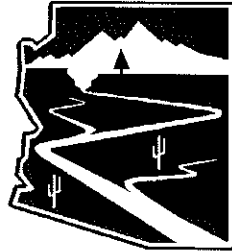
ARIZONA RIVERS COALITION

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A CITIZEN'S PROPOSAL FOR THE PROTECTION OF RIVERS IN ARIZONA

SECOND PRINTING (REVISED)



ARIZONA RIVERS
COALITION

The ARIZONA RIVERS COALITION gratefully acknowledges the generous support of
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DEDICATION



MORRIS K. UDALL

Arizona's only designated Wild and Scenic River, a 40 mile stretch of the Verde River, is protected for generations to come largely due to the persistence and vision of one person - former Arizona Congressman Morris K. Udall. It was Mo's hope that protecting this initial river segment would inspire future river protection in his home state.

To that vision and to honor Mo's personal leadership and dedication towards protecting our natural world for the benefit of all, the ARIZONA RIVERS COALITION dedicates this proposal and our work in seeking protection for all deserving rivers in our state to Morris K. Udall.

March 11, 1991

Dear fellow Arizonan,

To those not familiar with our state, Arizona conjures up images of cactus, deserts, canyons and mountains largely barren of vegetation. We ourselves use the rhetoric of dryness and scarcity when it comes to allocating water between cities, industry and agriculture. Let me suggest that we take a closer view.

In fact, Arizona is laced with ribbons of life-giving streams and rivers if we but look in the right places. Between those dry canyon walls and stark mountain ranges flow streams which provide the moisture and habitat for wildlife and recreation in otherwise forbidding country. The water we drink and use for economic pursuits flows down to us through this precious network of waterways. The fact that Arizona can sustain a vibrant society as well as a remarkable variety of wildlife species underscores the significance of our natural water flows.

It is also desperately important that we understand that we could lose the last of these streams if we do not act now to protect them in their natural state. Even in our brief history as a territory and then as a state we have lost nearly 90 percent of our free-flowing streams to dams, diversions and other developed uses. Our remaining waters could go the same way -- never to return to their original condition -- if we don't step forward to save them while we still have the chance.

While Governor, I established a Task Force on Recreation on Federal Lands, chaired by Scottsdale Mayor Herb Drinkwater, to make recommendations on maintaining the health of our natural resources for the enjoyment and use of Arizonans into the future. Among the programs advocated by the Task Force was support for federal Wild and Scenic river designation for deserving stretches of many of our remaining free-flowing streams. I'm personally delighted that proposals are now beginning to come forward, including this one, to do just that through Congressional action.

I would like to sound a call-to-action to all of us who care about preserving Arizona's natural heritage to move vigorously ahead with Wild and Scenic river legislation right now. The argument is compelling that protecting our natural flowing streams makes good economic sense for tourism, for water quality, for water management and for outdoor recreation. Also, from my perspective and I hope from yours as well, protecting these special places for our children is simply the right thing to do.

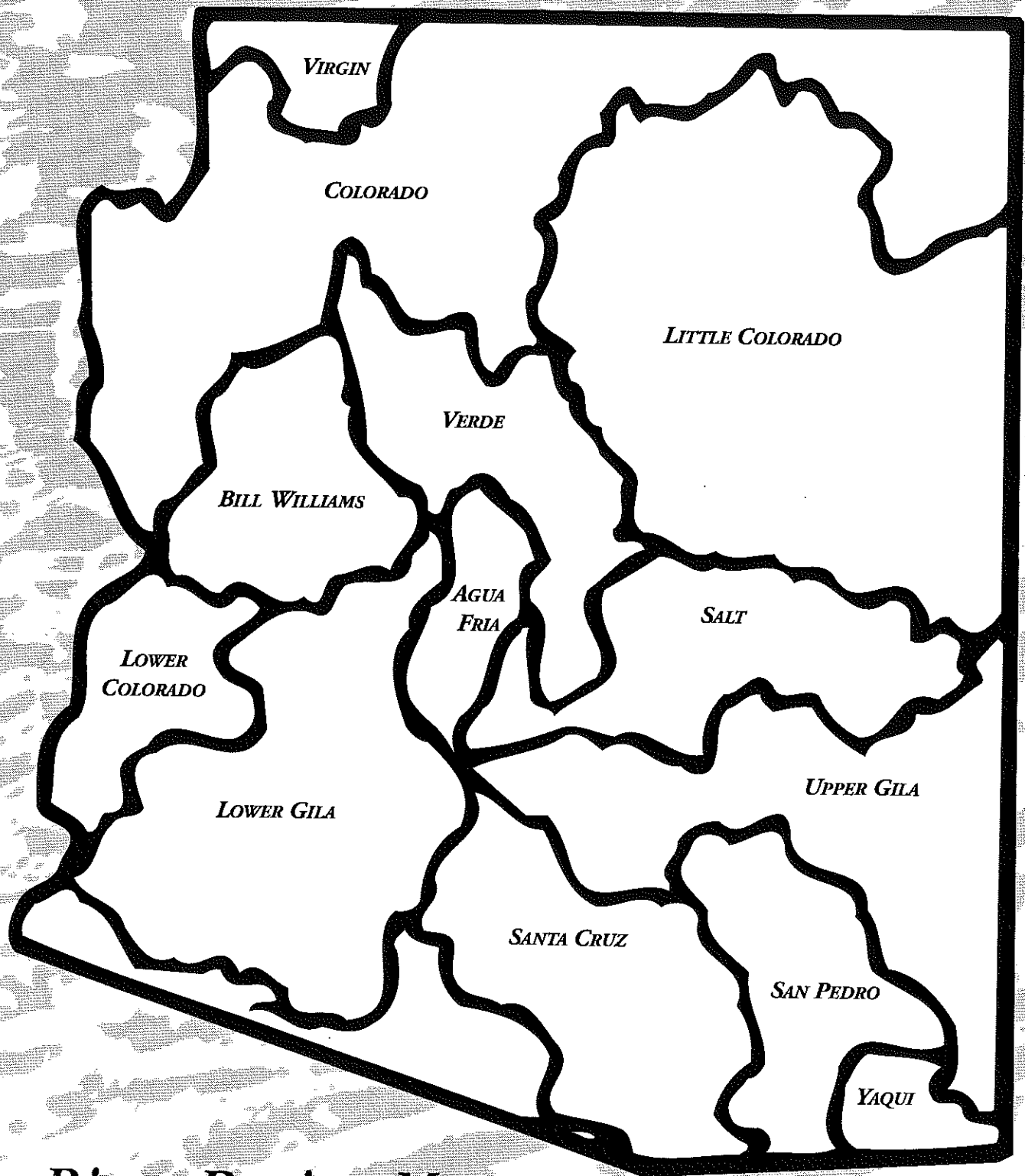
Please join me in roundly endorsing river protection for Arizona and working towards that goal with our elected officials while the opportunities are before us.

Sincerely,



BRUCE BABBITT

INTRODUCTION & PROPOSAL SUMMARY



River Basins Map

Introduction

The Wild & Scenic Rivers Act of 1968 was a far-sighted expression by Congress of national policy to protect, "for the benefit and enjoyment of present and future generations," selected "rivers . . . and their immediate environments [that] possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values." (16 U.S.C. 1271)

Over the last twenty-three years, Congress has implemented this policy by designating over one hundred-fifty river segments and 10,500 river miles as part of the national Wild & Scenic Rivers system. This activity has, however, largely bypassed the Southwest, and particularly Arizona. Only one portion of one Arizona river, the Verde, has been included, designated as part of statewide wilderness legislation enacted in 1984. As the supporting material in this volume demonstrates, many other Arizona rivers and streams qualify for national Wild & Scenic River designation.

Arizona is one of the most arid states in the Union. Its streams and wetlands have never, since the dawn of man, occupied more than a tiny fraction of the state's land area. Because of their comparative rarity and their contrast with surrounding lands, Arizona's free-flowing streams and their riparian environments are a treasure, ribbons of water and greenery laid across earth-toned landscapes. Depictions of Arizona's natural heritage, as conveyed to the world through photographs such as appear in *Arizona Highways*, frequently portray the state's surprisingly sylvan streams and rivers.

These riparian zones have outstanding ecological significance, disproportionate to that of other states. Over 75% of Arizona's native wildlife species depend upon them, including more than half of the threatened and endangered species. Cottonwood-willow riparian communities in the southwest are home to more bird species than any other ecosystem in the country, and Arizona is famed world-wide for the diversity of its bird populations.

Many of these streams also offer outstanding recreational opportunities. A half-million Arizonans fish, and the number of people engaged in hiking, birdwatching, river-running, and other activities dependent upon these areas has grown exponen-

tially in recent years.

In Arizona, as in other parts of the country, human settlements and activities have concentrated along waterways. As a result, many of the state's most significant archeological and historic sites are located along waterways.

For much of the state's history, the values offered by these riparian areas were either taken for granted or, sadly, ignored and destroyed in the rush to settle and develop the state.

The last few years have, however, witnessed a remarkable upsurge of interest on the part of the public in protecting the dwindling number of outstanding streams and riparian areas in the state. Appreciation has spread of the vital role these areas play in maintaining biological diversity - providing wildlife habitat and migration routes, supporting diverse fisheries, and furnishing the transitional corridors between different life zones.

The escalating economic significance of these areas as recreational sites is also becoming widely recognized. River-related recreation is an important component of what has become Arizona's second most dominant industry - tourism.

Finally, a growing body of evidence demonstrates the importance of free-flowing streams and healthy riparian ecosystems in capturing water-borne sediments and reducing the rate of siltation in reservoirs, improving water quality, facilitating groundwater recharge, and reducing peak flood flows, thus providing flood protection to downstream areas.

Concern with protecting Arizona's free-flowing streams dates back to the 1960's. The state's first comprehensive outdoor recreation plan, prepared in 1965 by the Arizona Outdoor Recreation Coordinating Commission (created by the state legislature), recommended a river conservation policy.

In the last few years, public attention and concern have come into sharper focus. A series of reports by blue-ribbon commissions, whose members represent a wide variety of interests, have without exception recognized the need for strong and immediate action to protect these streams and riparian areas. Most of these reports have specifically called for serious congressional consideration of including Arizona rivers in the national Wild & Scenic Rivers System.

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For example, in its 1986 report, the Governor's Task Force on Recreation on Federal Lands (chaired by Scottsdale Mayor Herb Drinkwater) called natural riparian areas a "fragile and threatened recreational resource" in the state. It recommended, among other things, pressing "vigorously for congressional designation of all . . . qualifying Arizona rivers into the National Wild and Scenic River System." (p. 46)

The Commission on the Arizona Environment in 1987 identified stream and riparian area protection as the top environmental action priority for the state.

In June 1989, Governor Mofford issued an executive order (No. 89-16) calling for a series of steps to improve protection of riparian areas, including creating a Riparian Habitat Task Force. Its October 1990 report called for, among other things, support for "efforts to designate qualified rivers and streams in Arizona to the National Wild & Scenic Rivers System." (Final Report, p. 19). Governor Mofford responded by issuing an executive order (No. 91-6) on February 14, 1991, that directed state agencies to "assist in the identification and evaluation of rivers and streams that might be designated as National Wild & Scenic Rivers."

An interagency team headed by the Arizona State Parks Board in 1989 published a milestone "Arizona Rivers, Streams & Wetlands Study" as part of the Statewide Comprehensive Outdoor Recreation Plan (SCORP). It contained a wealth of information about the ecological and economic importance of streams and riparian areas, documented threats to these resources, and identified strategies for their protection, one of which was adding Arizona rivers to the national Wild & Scenic Rivers System. (p. 216)

A poll in May, 1992 by the Morrison Institute for Public Policy, a research arm of Arizona State University, reported that "there is near-consensus that the state's remaining free-flowing rivers and stream-side wildlife habitats should be designated as wild and scenic". Eighty percent of Arizona residents polled favored such designation.

Perhaps the strongest, albeit indirect, indicator of public sentiment for more protection can be found in the overwhelming statewide support for the so-called "Heritage Fund" initiative at the November 1990 general election. This proposal to direct \$20 million of state lottery funds annually for natural area protection, outdoor recreation, and related projects, passed by a margin of better than 60-40. Significantly, it carried all but two

of the state's smallest of Arizona's fifteen counties, at a time when most other ballot propositions, especially those dealing with fiscal matters, were going down to overwhelming defeat.

As in the rest of the arid west, more than a century of dam-building and development projects have taken their toll on Arizona's streams. The recent SCORP report estimated that only 5-10% of the state's original riparian areas in the lower elevations remains today. (p. ES-3) Arizona rivers are dotted with impoundments, constructed with federal, state, local government and private funds. Most of these developments were built at a time when no policy existed to mitigate their adverse effects on streams and riparian ecosystems, and a number of them have entirely dewatered significant stretches of formerly free-flowing streams.

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designated as
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In the Wild & Scenic Rivers Act, Congress explicitly recognized the need to redress this historic one-sidedness. The Act was intended to correct the imbalance with a new "policy that would preserve . . . selected rivers . . . in their free-flowing condition to protect the[ir] water quality . . . and to fulfill other vital national conservation purposes." (16 U.S.C. 1271)

A variety of activities - proposed new dams, indiscriminate off-road vehicle use, mining activities, and others - threaten a number of Arizona's river corridors that remain in relatively unspoiled condition. The most immediate need for Wild & Scenic River designation, then, is to provide a management tool to ensure that these rivers are available to fulfill national conservation objectives.

This is not to say that the Wild & Scenic Rivers Act "locks up" these river corridors from all non-recreational activities. Other than dam-building, most existing uses will be allowed to continue on designated Wild & Scenic Rivers. But the designation does operate to ensure that the overriding management principle for these designated rivers is to protect those values that qualify them for inclusion in the national system. That management objective is precisely what is lacking on a number of Arizona rivers, and its absence threatens their future.

In one important respect, including qualifying Arizona streams in the national Wild & Scenic River System is not as complicated or contentious as it would be in some other parts of the country. The vast majority of the river segments proposed for protection are found on federal lands; specifically, on national forest or public lands managed by the Forest Service and Bureau of Land Management, respectively. The complexities of

mixed private-public or state-federal ownerships are for the most part absent on qualifying Arizona rivers.

The experience with federal agency management to date has shown, however, that existing management tools have not proved sufficient to adequately protect these streams. Consideration of Wild & Scenic River designation has been given comparatively little attention in the Forest Service and BLM plans that are now in effect. Part of the problem is that many of the agencies' plans were prepared before the emergence of a consensus on the importance of protecting these areas.

There are, however, welcome signs that agency attitudes and policies are beginning to change. Both agencies have elevated riparian area protection among their management goals. Actual implementation of these directives on the ground has, however, not moved very fast. Moreover, the process of amending existing plans or preparing new ones has moved so slowly that it may be many years before the agencies give full attention to Wild & Scenic River designation as a management alternative. In the meantime, unfortunately, important values on a number of these rivers may be lost.

Wild & Scenic River designation would also make improved management coordination between these two federal agencies possible. Jurisdiction over a number of river corridors proposed for designation is now divided between the Forest Service and the BLM. While these two agencies have broadly similar management mandates, their approaches on the ground in particular river corridors may not be wholly consistent, and inconsistencies can adversely impact on river and riparian management.

Another important feature of qualifying rivers in Arizona helps facilitate congressional consideration. Most of the rivers proposed for designation in the state are in the upper reaches of the watersheds in which they are found, and are thus upstream from the vast bulk of present or projected water uses in the state, and from nearly all present or projected dams and diversion works. A basic protection the Act provides is to preserve and conserve the river water (subject, of course, to valid existing water rights) through the designated reach. This operates, in effect, to ensure that water as it emerges from the designated reach is not diminished in quantity, and is protected in quality, so that it remains available to support the range of conventional uses of water. The happy circumstance of the location of most of the Arizona rivers proposed for designation means that serious conflicts over water, like conflicts over land use, are minimized.

So far we have addressed mostly the conserving and protective virtues of Wild & Scenic River designation in Arizona. But it would be a mistake to conceive of these designations solely in those terms. Experience in many other parts of the country shows that designations can provide a significant boost to land values and to increasingly recreation-dependent rural economies. More broadly, new designations in Arizona would be a highly visible symbol of Arizona's growing recognition of the economic value of sensibly managing the state's marvelous natural heritage.

In short, the ultimate value of Wild & Scenic River designation is not only in the protection it affords, though this may be critical in the nearer term. Additionally, it is in the positive statement designation makes - that good resource management makes economic and cultural sense. It promotes the kind of economy and helps sustain the quality of life that have together made Arizona such a desirable place to live.

In recent years the state's congressional delegation has taken several important steps to advance that progressive vision of Arizona's future. It has reached a bipartisan consensus on such important natural resource management issues as protecting significant tracts of federal land as wilderness in 1984 and 1990, safeguarding the Grand Canyon from intrusive airplane overflights, finding suitable alternatives to Orme and Cliff Dams in the Salt/Verde watershed, establishing the nation's first National Riparian

Conservation Area in the upper San Pedro River, and safeguarding Grand Canyon natural and cultural resources near the river with the passage of the Grand Canyon Protection Act.

Adding qualifying Arizona rivers to the national Wild & Scenic River System is a logical next step, fully consistent with the vision that has sustained these other initiatives. It is a missing piece in our continuing quest to show the nation and the world that we possess, and recognize the value of, a priceless natural heritage. It is, in short, an idea whose time has come.

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Proposal Summary

Since publication of the March, 1991 "Arizona Rivers - Lifeblood of the Desert", the Bureau of Land Management (BLM) and Forest Service (FS) have both released publications regarding the eligibility of potential wild and scenic rivers on their respective lands in Arizona.

The BLM's document, "Potential Wild and Scenic Rivers" was first released in January, 1992 at the state BLM office in a meeting with Arizona Congressional delegation representatives. BLM looked at 24 rivers in the report, finding 32 river segments on 17 rivers and creeks eligible for inclusion into the National Wild and Scenic Rivers System. BLM also committed to evaluate five rivers recommended by ARC which they have not yet reviewed. BLM included a written comparison of the ARC proposal to BLM's findings of eligibility.

The FS released their "Preliminary Analysis of Eligibility and Classification for Wild/Scenic/Recreational River Designation" in January, 1993 at public meetings held at the request of, and attended by, the Arizona congressional

delegation. The FS reviewed well over 150 rivers on their lands. They found 56 of these to be "preliminarily" eligible and have assigned preliminary classifications to the eligible segments. Both of these reports are available from the agencies.

The Arizona Rivers Coalition agrees with the eligibility findings by the agencies of rivers that are not in our proposal. We will support designation of many of these rivers, such as Aravaipa Creek and Leonard Canyon.

However, since we have been unable to research all of the additional rivers found eligible, we cannot make recommendations on many of them until the agencies have released their resource analysis on the streams, scheduled for September, 1993.

The following matrix shows the recommended classifications by the Arizona Rivers Coalition on the rivers included in this proposal along with the agencies finding of eligibility and their recommended classification.

Comparison of ARC Proposal to Agency Eligibility Findings.

RIVER NAME	ARC PROPOSAL	BUREAU OF LAND MGMT.	FOREST SERVICE
SALT RIVER BASIN			
Bear Wallow Creek	pending	—	4 miles W
Black River (main stem)	19.5 miles W	—	19.5 miles, W,S,S
West Fork - Black	14 miles S,W,R	—	14 miles S,W,R
East Fork - Black	18 miles S,W,R	—	18 miles S,R
Fish Creek	12 miles W	—	10 miles S
Home Creek	pending	—	9.5 miles S
Canyon Creek	pending	—	5 miles R
Cherty Creek	33 miles W,S,R,W	—	25 miles W,S
Lower Salt River	11.5 miles R	—	11.3 miles S, R
Parker Creek	pending	—	8.5 miles S
Pinto Creek	9 miles W	—	9 miles S
Salome Creek	20 miles W	—	19 miles W
Spring Creek	pending	—	18.5 miles R,W
Tonto Creek	55 miles R,W,W	—	30 miles -,W,S
Upper Salt River	52 miles S,W	—	47 miles S,W,W,S
Workman Creek	pending	—	9 miles R,W
Campaign Creek	11 miles W,S	—	11 miles not eligible
Coon Creek	9.5 miles W,S	—	9.5 miles not eligible
UPPER GILA RIVER BASIN			
Blue River	66 miles S,R,W,S,W	—	53 miles S,S,R
Chitty Creek	7 miles W	—	7 miles W
Eagle Creek	26 miles R	—	26 miles R
KP Creek	pending	—	11 miles W
Pigeon Creek	16 miles W,R	—	16 miles R,W
San Francisco River	38 miles W,S,R	—	22 miles W,R
Lower San Francisco	8 miles R,W	8 miles R,W	—
Gila River (Box)	26 miles W,S	26 miles S,W,S	—
Bonita Creek	15 miles S,R	15 miles R	—
Sardine Creek	pending	—	9 miles S
Ash Creek	12 miles W	—	6 miles R
South Fork Cave Creek	6 miles W	—	7.5 miles W,S
Cuna & Lower Cave Creeks	2/5 S,W	—	2.5/7 miles W,R
Marjilda Creek	pending	—	7-R
Arnett/Telegraph Creeks	pending	—	2.5/1 S,S
Gila River (middle)	27.5 miles R,W,R	34 miles R,W,R	—

* The National Park Service has found these to be eligible.

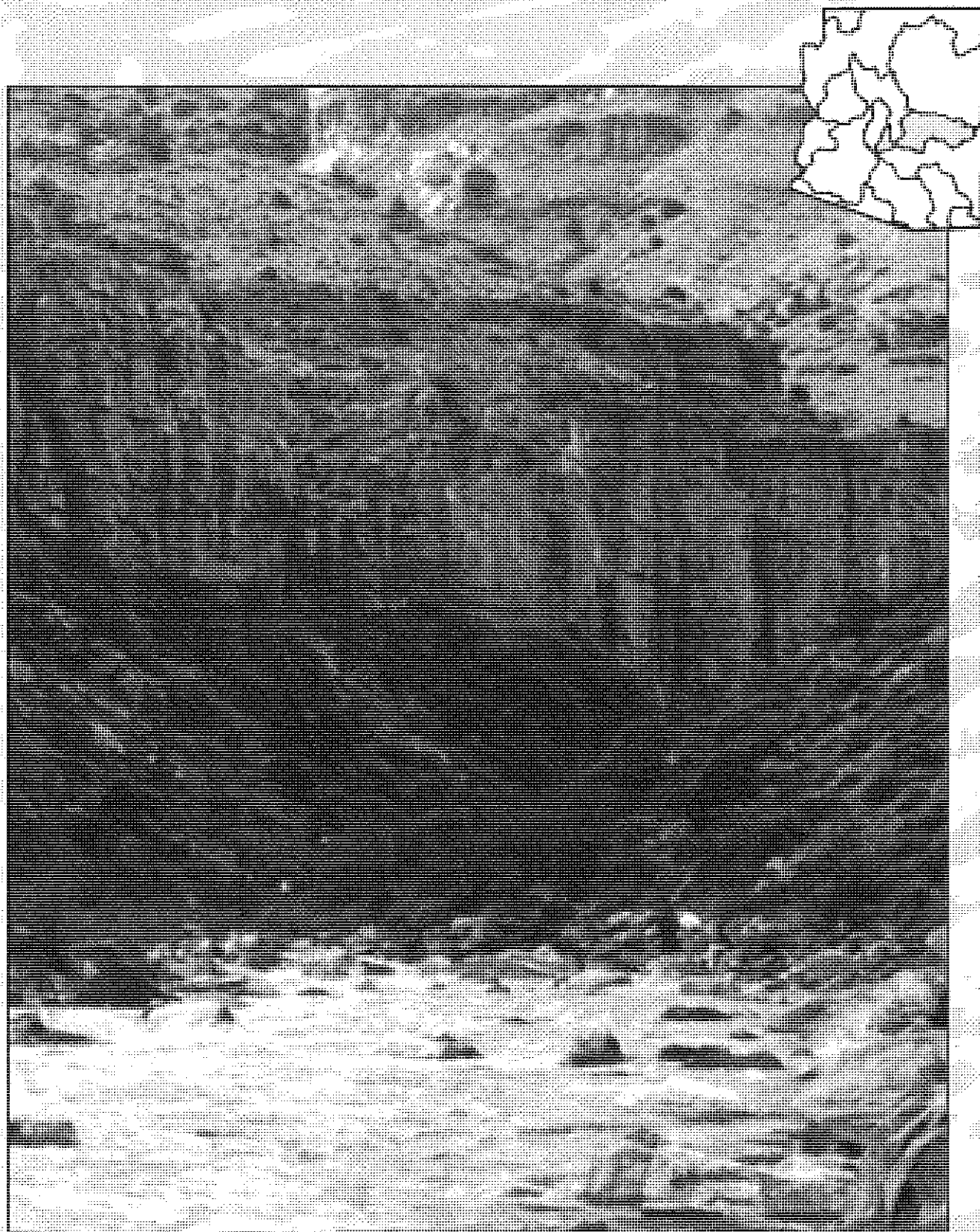
Proposal Summary (Continued)

RIVER NAME	ARC PROPOSAL	BUREAU OF LAND MGMT.	FOREST SERVICE
LITTLE COLORADO RIVER BASIN			
Chevelon Canyon	26 miles W,S	—	26 miles W,S
West Fork - LCR	10 miles W	—	10 miles W,R,W
East Fork - LCR	pending	—	11 miles S
South Fork - LCR	pending	—	9 miles S
Willow Creek	Listed w/West Clear	—	14 miles W
Willow Springs Canyon	pending	—	3 miles W
Woods Canyon	pending	—	4 miles W
Barbershop Canyon	14 miles W	—	10 miles W
East Clear Creek	65 miles W,S,R	—	25 miles S
Leonard Canyon	17 mile R	—	17 miles R
SAN PEDRO RIVER BASIN			
Grant Creek	pending	—	5 miles R
Post Creek	pending	—	2 miles S
Aravaipa Creek	11 miles W	11 miles W	—
Turkey Creek	2.5 miles R	2.5 miles R	—
Redfield/Swamp Springs	17 miles W	-/2.5 -/W	9 miles S
Buehman Creek	8 miles W,R	—	5 miles not eligible
Bass/Hot Springs	8 miles W	3.5/not 6/W	3/not
San Pedro River	34 miles S,S	46 miles R	—
SANTA CRUZ RIVER BASIN			
Cienega Creek	10 miles S	10 miles pending	—
Canada del Oro	pending	—	9 miles W,R
Romero Canyon	pending	—	8 miles W, R
Sabino Creek	pending	—	11 miles W,R
LOWER GILA RIVER BASIN			
Hassayampa River	60 miles S,W,S,R,S	15 miles pending	16 miles not eligible
AGUA FRIA RIVER BASIN			
Agua Fria River	21 miles S,W	21 miles S,W	—
VERDE RIVER BASIN			
Oak Creek	13 miles S	—	14/8 R/not eligible
West Fork of Oak Creek	12 miles W	—	8 miles W
Sycamore Creek	4 miles S, W	—	4 miles W
West Clear Creek	41 miles, W,R	—	36/5 W,S/not eligible
Wet Beaver Creek	33 miles W, R	—	18/15 W, R/not eligible
Upper Verde River	33 miles R	—	33 miles R
Verde River - extension	10 miles W	—	10 miles W
East Verde River	56 miles R,S,W	—	22/32 R,S/not eligible
Fossil Creek	pending	—	13 miles R, W
BILL WILLIAMS BASIN			
Wright Creek	pending	13 miles S	—
Burro/Francis Creeks	62/7 W, S	53/14 W, R, W, S/R	—
Big Sandy River	pending	28 miles S,W	—
Santa Maria River	80 miles W	35 miles W,S	—
Bill Williams River	22 mile S	16/5 W, S/ pending	—

Proposal Summary (Continued)

RIVER NAME	ARC PROPOSAL	BUREAU OF LAND MGMT.	FOREST SERVICE
VIRGIN RIVER BASIN			
Virgin River	35 miles W,S,R,S	34 miles W,S,R,R	—
COLORADO RIVER BASIN			
Kanab Creek	80 miles W	22 miles re-evaluate	20 miles W
Paria River/Buckskin	35/10 W,W	33/12 W/pending	—
Colorado River - Glen Canyon*	16 miles S	—	—
Colorado River - Grand Canyon*	237 miles W	—	—
SONORA RIVER BASIN			
Rucker Canyon	pending	—	6 miles W
Sycamore Canyon	pending	—	5 miles S

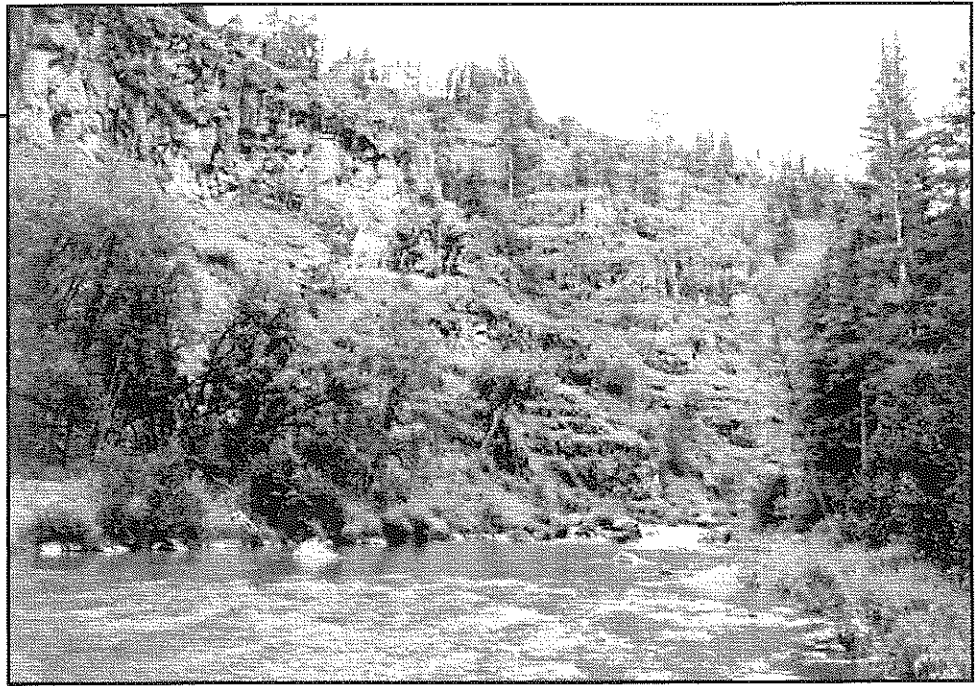
SALT RIVER BASIN



SALT RIVER CANYON (Photo: Ken Goldman)

Black River

The Black River headwaters are in the White Mountains of eastern Arizona. The system forms a major tributary of the Salt River. The Black flows in a tortuous channel through a number of narrow gorges marked by magnificent rock formations and cliffs. The Black River was included in the National Rivers Inventory conducted by the National Park Service, which concludes that "the Black River is considered one of the wildest rivers in Arizona." It listed scenic and recreation values as "best in the state", and confirmed the trout fishery and wildlife on East Fork as outstandingly remarkable features. The Forest Service has recommended 20 miles of the East and West Forks for wild and scenic river designation.



BLACK RIVER (Photo: Congressman Jon Kyl)

ARC RECOMMENDATIONS

18 miles of East Fork, 14 miles of West Fork, 12 miles of Fish Creek and 16 miles of the mainstem of Black River as follows:

East Fork from the reservoir below Crosby Crossing to Three Forks: Scenic

East Fork from Three Forks to Diamond Rock Campground: Wild

East Fork from Diamond Rock Campground to confluence: Recreational

West Fork from Forest boundary to Thompson Ranch (FS Road #116): Scenic

West Fork from Thompson Ranch to West Fork Campground: Wild

West Fork from campground to confluence: Recreational

Fish Creek from Forest Road #24 to confluence: Wild

Black River from confluence of East and West Forks to Black River bridge: Wild

Black Rivers bridge to Forest boundary: Wild

It is also recommended that the 97 miles of the Black River on Indian Reservation lands (from the National Forest boundary down to the confluence with White River) be identified as a Wild and Scenic River Study Area to be conducted by the tribal governments. This would

encourage the San Carlos Apache and White Mountain Apache tribal governments to evaluate the suitability of designation. The eventual designation of the entire Black River System would offer complete protection to one of the wildest rivers in the Southwest.

MANAGING AGENCIES: Apache-Sitgreaves National Forest; Arizona Game and Fish Department.

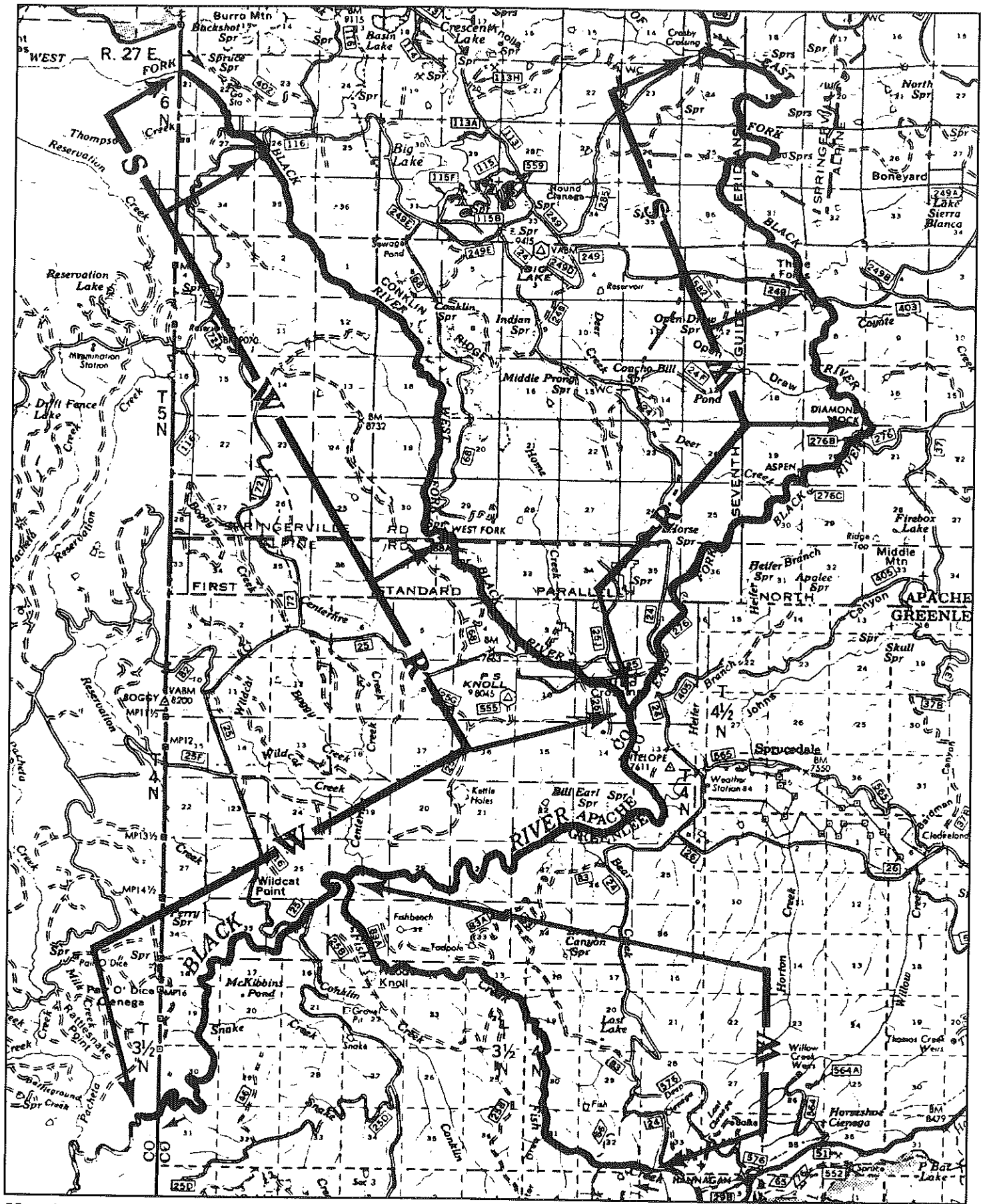
PRIVATE LAND: Approximately 1.2 river miles.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: This is a highly scenic and pristine river corridor. Scenery varies from rimbered knolls and large open meadows to a number of narrow gorges and steep cliffs with exposed and colorful rock formations. Diversity in vegetative cover ranges from brushland and pinon-juniper to ponderosa pine and oak. The linear corridor represents the longest continuous stand of virgin and old growth timber in the Southwest. There are few man-made intrusions.

Recreation: The Black River represents one of the most popular destinations for developed and dispersed recreation in the White Mountains. Trails along Fish Creek and mainstem Black River provide backcountry access for hikers, campers and fishermen. Typical spring run-off provides an outstanding and challenging boating opportunity for low-draft watercrafts. This is also a popular area for hunting elk, deer, bear, and turkey.

Geologic: The river flows through a series of winding gorges cut into Tertiary basalt that is 15-38 million years old. There are terraces and benches hundreds of feet above river level that mark previous locations of the river. Most of the gorges are up to 800 feet deep with dark basalt walls. The river and its canyons are located in the geologic transition zone between the Colorado Plateau to the north and the Basin and Range Province to the south, so that the river provides a sampling of both terrains.



Map 1 - Black River

Black River (continued)

Fish and Wildlife: The entire proposed corridor represents an important cold water fishery. Fish Creek has been identified by Arizona Game and Fish and the Forest Service as outstanding habitat for the resident population of Apache trout, which is threatened on both federal and state listings. The mainstem Black River is a popular fishery for trout. East and West Forks of Black River are heavily fished during the recreation season. In the summer of 1990, Anglers United, Trout Unlimited, and Arizona Flycasters sponsored and completed a \$60,000 fish habitat improvement project on East Fork.

The Black River system provides habitat for a number of raptors. Peregrine falcon and northern goshawk are known to reside within the area. A large population of bald eagle winter along this portion of the Black River. Peregrine falcon and bald eagle are both state and federally listed as "endangered". Northern goshawk is a state "candidate species".

Several nesting pairs of Mexican spotted owls have been located within the area during the spotted owl surveys conducted by the Forest Service in 1989 and 1990. The Mexican spotted owl is listed by the state as "threatened" and is listed as "sensitive" by the Forest Service. It is also a "candidate species" under the Endangered Species Act.

The Black River System also provides habitat for the osprey and the meadow jumping mouse, which are listed as "threatened" by the state of Arizona. The Mexican and narrow-headed garter snakes and the spotted bat, all state "candidate" species reside here, as does the endangered water shrew. Several additional special status species recorded from the head waters of Black River include: Three Forks springsnail, California floater, Arizona willow (West Fork), Gooding's onion (West Fork, Fish Creek), Mogollon clover (West Fork), montane vole, occult little brown bat, and Chiricahua leopard frog.

An isolated and introduced herd of big horn sheep have become established in East Fork. The old growth characteristics along Black River provide habitat for black bear and important winter range for deer and elk.

OTHER CONSIDERATIONS

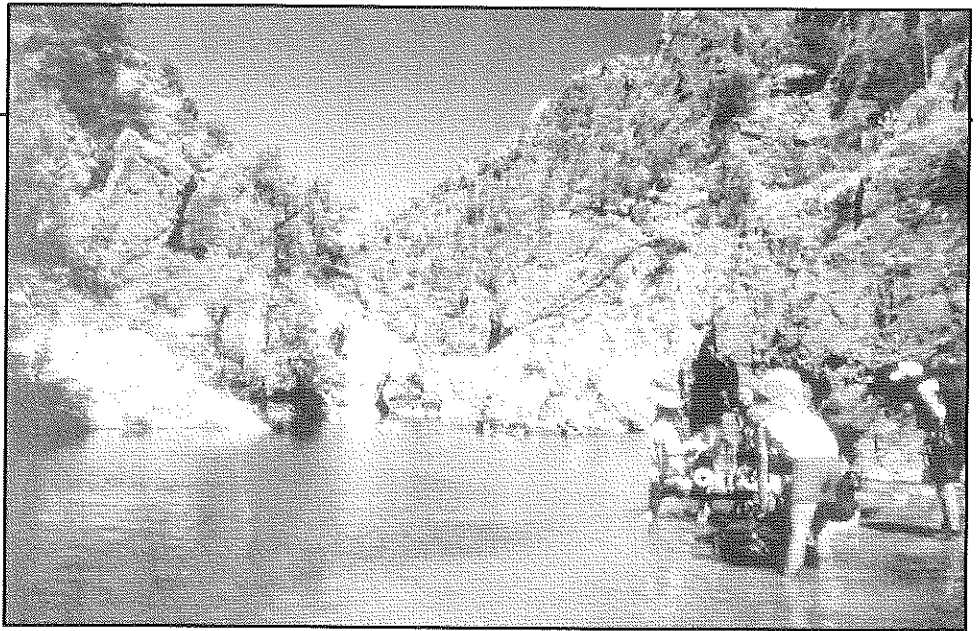
The entire proposed area has been managed as a special off road vehicle area since 1980, and no motorized vehicles are allowed within the corridor except on the existing roads adjacent to the recreation areas along East and West Fork. Designation will be compatible with the Apache-Sitgreaves recreation development plan for both the East and West Fork and would have no detrimental effect on the local recreation industry. In addition, the area is currently classified as "not capable, available, or suitable" for timber harvest through the Land Management Planning process conducted by the Forest Service. Designation would assure that any future logging plans in the river corridors would have no adverse effect on the outstandingly remarkable values.

The merits of the Black River system are many and beyond question. It is obvious that recreational values will rightfully drive future management along the Black River. However, there is such high

demand for all the resources along this corridor that there is a very real danger of this area being over-developed and "loved to death". The segment designations included in this recommendation will allow for a full range of recreational opportunities while preserving the most scenic and wild portions of the corridor.

Tonto Creek

Draining a large expanse of the sub-Mogollon Rim region, primarily the Sierra Ancha to the east and the Mazatzal Mountains to the west, Tonto Creek is a major tributary of the Salt River. Originating in the ponderosa-clad country east of Payson, Tonto Creek courses through one of Arizona's most heavily recreated areas, from the State Fish Hatchery, past Kohl's Ranch, to Bear Flat. Below Bear Flat, the surrounding canyon dramatically heightens to 1500 feet as Tonto Creek swiftly traverses the Hell's Gate Wilderness Area. On its journey through Hell's Gate, the stream is transformed from its coniferous origin to a Sonoran desert artery. Exiting Hell's Gate, Tonto Creek slows as it meanders past the ranching/retirement community of Gisela, before plunging into a final constricted canyon upstream of Roosevelt Lake.



TONTO CREEK (Photo: Joel Rea)

ARC RECOMMENDATIONS

Approximately 55 miles from State Fish Hatchery to Gun Creek as follows:

State Fish Hatchery to Bear Flat: Recreational

Bear Flat to Gisela: Wild

Through Gisela to Cocomunga Creek: Recreational

Cocomunga Creek to Gun Creek: Wild

MANAGING AGENCY: Tonto National Forest

PRIVATE LAND: Recreational sites in upper reaches, Gisela, and the 76 Ranch at Rye Creek.

OUTSTANDINGLY REMARKABLE VALUES

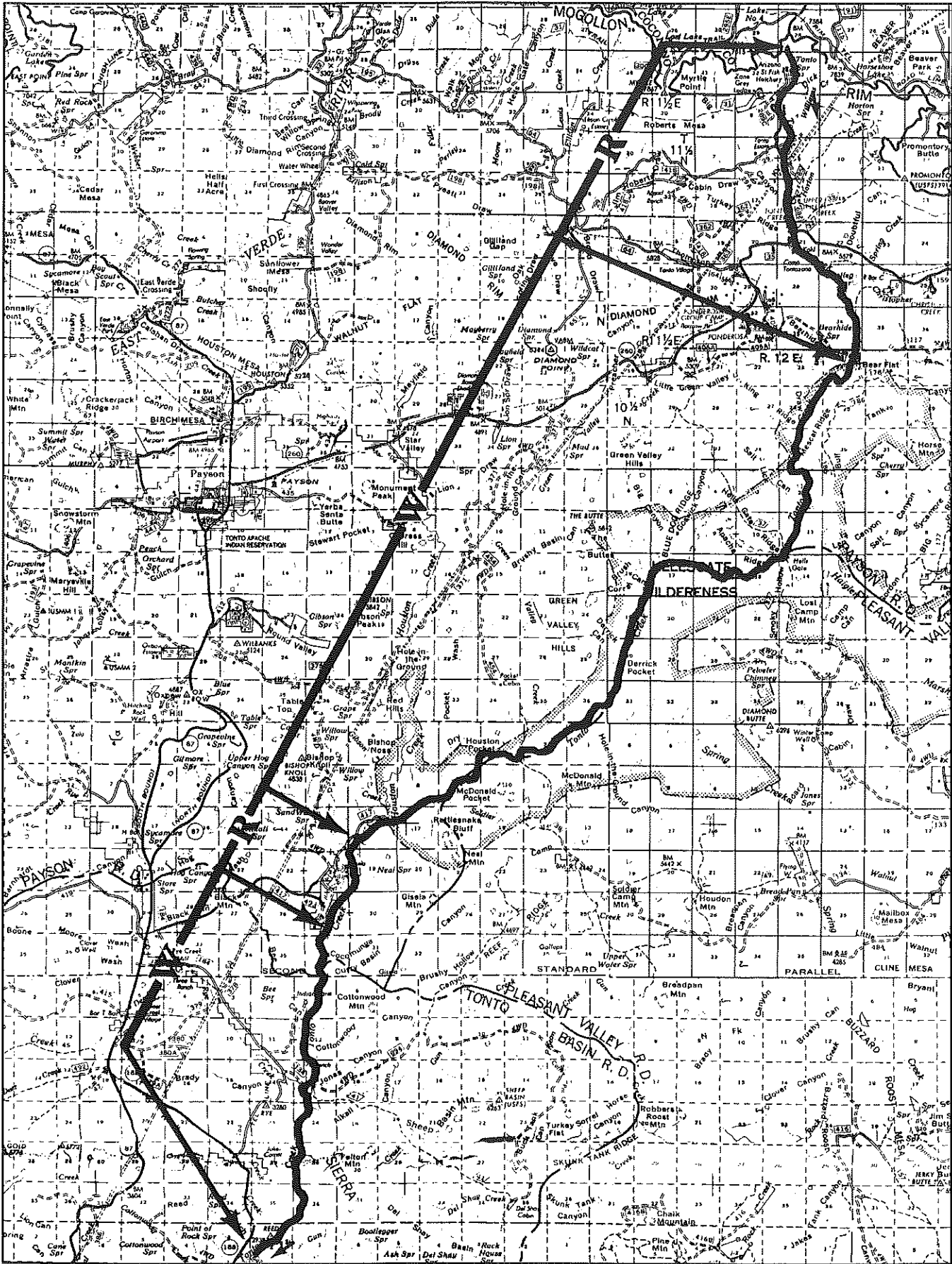
Scenic: Tonto Creek is a relatively short stream, but offers a wide range of ecological communities from its headwaters at 7,400 feet to the desert below at 2,200 feet. Tonto Creek gracefully drains the ponderosa pine forests of the Mogollon Rim, slices into the rugged chaparral and juniper-clad Hell's Gate Wilderness to create a beautifully-carved canyon, and provides a ribbon of life as it slowly passes through the Sonoran Desert where there are spectacular views of the Mazatzals and Sierra Anchas.

Recreation: The upper reach of Tonto Creek, near Kohl's Ranch, is heavily used by Phoenix vacationers as a retreat from summer heat. There are several camp grounds in the area which provide access for hiking, swimming, fishing and relaxing. Tonto Creek also offers an excellent opportunity for those seeking solitude and adventure as the doorway to a very remote section of Arizona found in the Hell's Gate Wilderness Area and in a roadless canyon. Kayaking and rafting are possible during high-water periods from Gisela to Gun Creek.

Geologic: The creek plunges from the Mogollon Rim, an 8,000 foot elevation escarpment to about 3,000 feet in elevation at the end of the segment proposed for designation. The Mogollon Rim is the largest single landform in Arizona, reaching across the entire width of the northern third of the state. In its one mile vertical fall, the creek passes through several canyons with stepped cliffs rising several hundred feet to a basalt cap. The creek passes several huge rock falls and landslides, exposes several spectacular faults, and crosses the boundary between the Colorado Plateau and the Basin and Range Province. At the upper end, the country rock is typical of the plateau; Coconino Sandstone and Supai Formation sandstones and mudstones. In its lower reaches the creek passes through older Precambrian rhyolite and granite, including some of the oldest rocks in the state.

Fish and Wildlife: Brook, rainbow and brown trout have been historically, and still are, popular game fish on Tonto Creek. There are also historic records of the federally listed razorback sucker, candidate roundtail chub, and reintroduced Gila topminnow now occupy the Tonto Creek drainage. Mountain lions, bears and two species of deer attracted writer and hunter Zane Grey to the area, as well as today's hunter and outdoor enthusiast. The Tonto Creek drainage also provides critical nesting, foraging and roosting habitat for migratory and resident bird species; including the federally listed endangered bald eagle. The narrow-headed garter snake and the Arizona toad are two special status species that also depend upon Tonto Creek as a haven from the arid environment outside the reaches of the riparian zone.

Ecological: Several features unique to the tributaries of the Salt River have been discovered. For example, the major drainages (such as



Map 2 - Tonto Creek

Tonto Creek (continued)

Cherry Creek and Tonto Creek) that run from the Mogollon Rim toward the south have been found to be crucial corridors supporting wildlife that travel to and from the central basins. This allows natural mixing of gene pools, necessary for the maintenance of healthy populations.

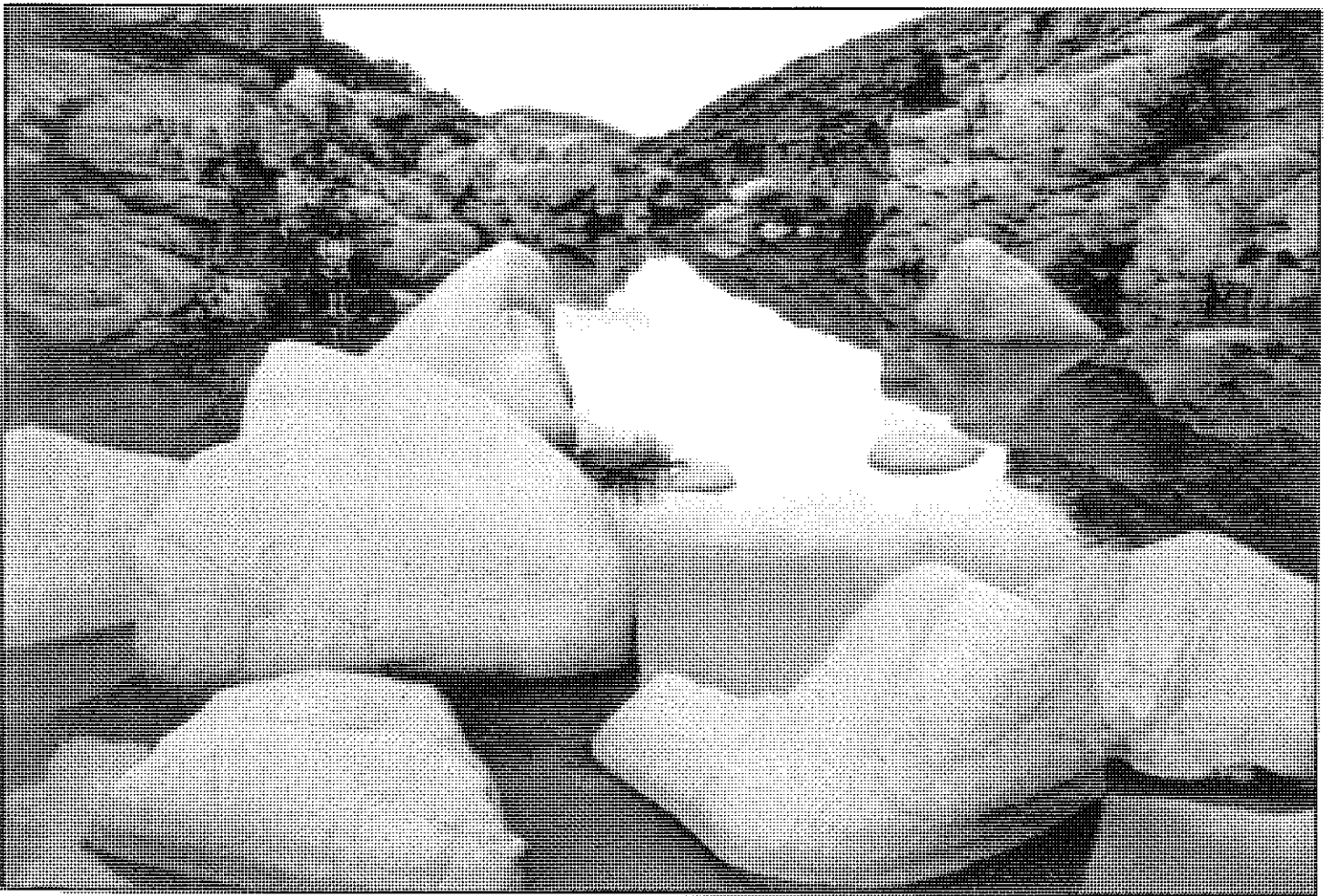
Cultural: For centuries Tonto Creek below Gisela was a major route and habitation area for the Hohokam and Salado cultures. Numerous sites are scattered all along this stretch, scarcely surveyed by archaeologists.

OTHER CONSIDERATIONS

Tonto Creek is faced with several threats, notably, water and stream-side degradation in the upper reaches, and water diversions and sand and gravel operations in the lower reach. In its 1985 Forest Plan, the Tonto National Forest concludes that Tonto Creek was sufficiently protected by the Hell's Gate Wilderness and did not warrant further study as a potential Wild and Scenic River. Since that time, sand and gravel operations have destroyed the river's character below Gun Creek and the continued growth by Kohl's Ranch and Gisela have placed

more demands on the creek. These threats to the integrity of Tonto Creek, when weighed against the proven recreational value of an unfettered and pristine stream, deserve to be resolved. Wild and scenic river designation offers that opportunity and Tonto Creek clearly befits that recognition.

Since the 1920's when Zane Grey resided along Tonto Creek it has been a favored recreational destination for Arizona residents. The recreational and living attributes of Tonto Creek near Payson and Gisela have also enticed many new residents who demand more water and related amenities. This growth needs to be balanced with the strongest possible measures to ensure the long term recreational and biotic sustainability of the stream and its related communities. Much of the lower reaches of Tonto Creek have already been scarred and ravaged by gravel operations, but there is still time to protect, through Wild and Scenic river designation this Arizona favorite.



TONTO CREEK (Photo: Tim Flood)

Salt River Canyon

The magnificent Salt River through Salt River Canyon is an easy three hour drive via Globe, Arizona from both Phoenix and Tucson. It is rare for such a wild, rugged, free-flowing river to be readily accessible for recreationists from two major metropolitan areas. The Salt River flows through a pristine and scenic canyon with waterfalls and rapids. The surrounding desert comes down to the riparian zone where saguaro cactus intermingle with cottonwood trees. Notable features listed in the 1982 National Rivers Inventory include scenic, recreation, geologic, fish and wildlife, botanic, historic, archaeological and cultural.

ARC RECOMMENDATIONS

52 miles from Highway 60 bridge to Highway 288 bridge as follows:

Highway 60 bridge to the Salt Banks: Scenic

Salt Banks to the Highway 288 bridge: Wild

The plan for inclusion of Salt River as a component of the National Wild & Scenic River system will require input from, and acceptance by, the two Apache tribes. Alternative segments of the Salt River could be considered for designation. For example, the entire Salt River (from the confluence of Black and White Rivers to Roosevelt Lake) or the segment lying only within the Forest Service lands (from Lower Corral Canyon to Roosevelt Lake). In any case, it is time to address the protection of what remains of Arizona's premier central basin river.

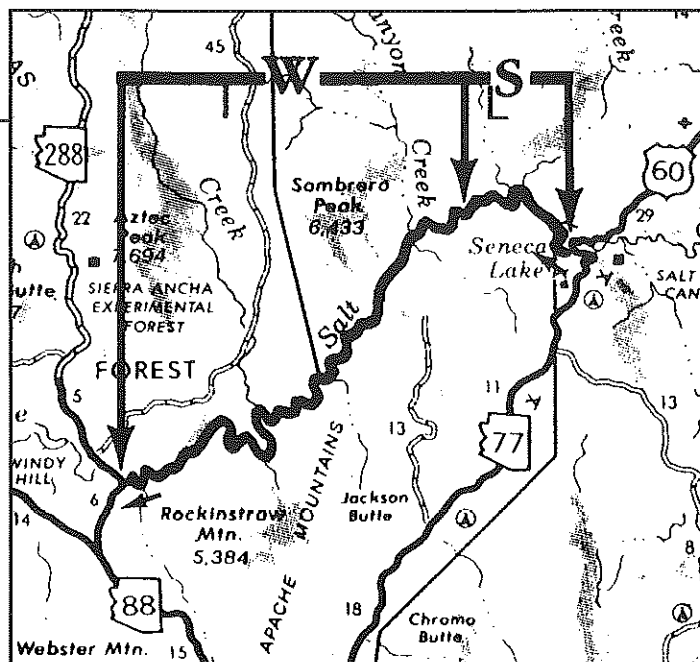
MANAGING AGENCY: Tonto National Forest

PRIVATE LAND: White Mountain Apache and San Carlos Reservations

OUTSTANDINGLY REMARKABLE VALUES

Scenic: A wide variety of terrain and scenery is found on this segment of the Salt, often referred to as a "mini-Grand Canyon." Scenic features include 2,000 feet deep, multi-colored, steep-walled canyons; exceptional riparian habitat dominated by cottonwood, sycamore, and mesquite trees; saguaro cactus and bald eagle soaring overhead. The river leaves Salt River Canyon and flows through desert terrain before entering Jump-off Canyon with dramatic towering walls and Quartzite Falls. There is little sign of human intrusion to detract from the beauty of the river.

Recreation: Over ten thousand people each year raft this section of the Salt River. Some say it exceeds even the Grand Canyon as Arizona's most technically challenging white water run. The rapids are complex and exciting, ranging in difficulty from Class II to the unrunnable Quartzite Falls. The big-water rafting season lasts from



Map 3 - Salt River Canyon

January to May, but commercial trips run the river in small inflatable boats at low water, and enjoy nearly year round boating. Salt River also receives steady use for fishing, picnicking, camping, hiking, hunting, general sight-seeing, and photography by thousands more visitors each year. Tourism and recreation contribute significantly to the economy of the towns of Globe and Miami, and to the White Mountain Apache Tribe. The entrance at Highway 60 is a fee-use area managed by the White Mountain Tribe.

Geologic: As the Salt River cuts through the arid mountains of Arizona, a great variety of formations are exposed. Layers of limestone, diabase, basalt, granite, and sandstone are easily observed. There are also examples of faulting and folding which are very unique, such as a formation called the Devil's Postpile. The marvelous Salt Banks, formed by evaporation of some of the salt-water springs that give the river its name, are about seven miles below the Highway 60 bridge.

Riparian: The riparian values of desert rivers have been well documented in numerous studies. The Salt River and its adjacent areas are vegetated by extremely rare, as well as common plant communities. More important is the juxtaposition and intimate associations between the desert and riparian communities. The Salt is the central corridor for dozens of species of fish and wildlife. Ecologically, its perennial flow unites the central basins to the White Mountains and eastern half of Arizona.

Fish and Wildlife: The Salt is home to several candidate, threatened and/or endangered species such as the bald eagle, roundtail chub, zone-tailed hawk, Arizona Bell's vireo and narrow-headed garter snake. This free-flowing river is also of utmost importance in maintaining an example of Arizona's native big-river fish community. The Salt River Canyon presents Arizona's best possibility for reintroduction of the Colorado squawfish and razorback sucker. Reintroduction of these fish have been conducted for several years.

Bald eagles forage along Salt River and nest on ledges of the steep canyon walls or in large riparian trees. Several young are often fledged each year from the nests along the Salt River.

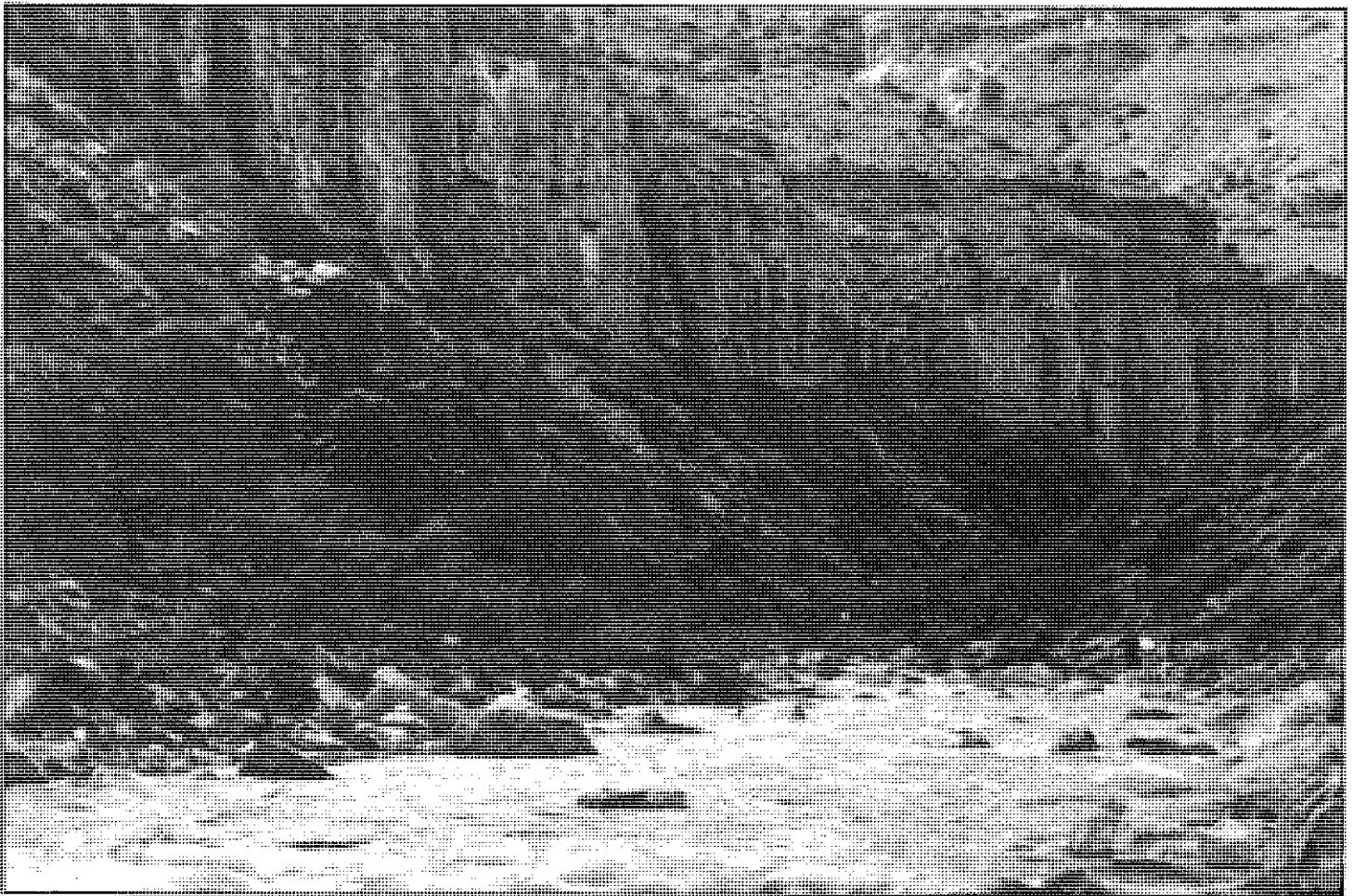
Cultural: Two excellent cliff dwellings are located near the river and are regularly visited by raft trips. A complete inventory has never been done along the Salt, although the river has played a significant role in both the cultural and historic development of Arizona. The prehistoric culture that inhabited the corridor has been given its own name - the Salado. Unfortunately, the chance to learn more about this culture was lost when Roosevelt Dam flooded many prehistoric sites.

OTHER CONSIDERATIONS

The Salt River has always been one of the most important rivers in Arizona. This section of Salt River shows what an undammed, free-flowing, wild, desert river is like. Although there is federally designated wilderness surrounding most of the proposed segment, added protection is necessary to keep this part of the Salt River the way it is. Federal Wild & Scenic River designation will preserve a river whose likes are found no where else in the Southwest, or the world.

The Salt River is an increasingly valuable natural and economic resource to nearby towns and Indian tribes. Designation is desirable for several reasons: 1) it will increase local tourism because of the national attention that is associated with a raftable Wild & Scenic River; 2) it will allow the towns and tribes to continue to capitalize on this resource; 3) it will ensure protection of the outstandingly remarkable values of the Salt River if upstream water diversions are considered; 4) in central Arizona the ecologic importance of the Salt River is

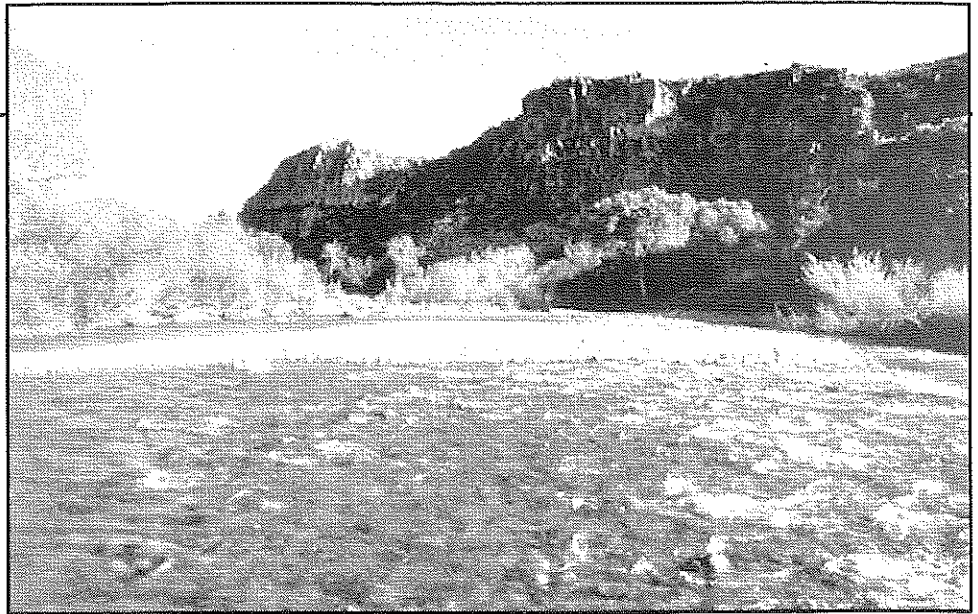
unparalleled and must not be diminished; 5) heavy and increasing recreational pressures will result in serious degradation of the river's values if a suitable management plan is not implemented very soon and 6) only Congress is able to mandate the clear management directives that are required.



SALT RIVER CANYON (Photo: Ken Goldman)

Cherry Creek

The upper section of Cherry Creek flows over relatively flat terrain through mixed conifer, then enters a steep canyon adjacent to the Sierra Ancha Wilderness. This area is remote and access is difficult. It is dominated by pinyon-juniper/chaparral vegetation which is good deer habitat. The lower section enters a flat plain with desert scrub before reaching the Salt River Canyon Wilderness and flowing into the Salt River. The entire length of the creek supports a rich riparian habitat and is an important wildlife migration corridor.



CHERRY CREEK (Photo: Ken Goldman)

ARC RECOMMENDATIONS

33 miles from Cherry Creek Springs to confluence with the Salt River as follows:

15 miles from Cherry Creek Springs down to Horse Camp Creek: Wild

6 miles from Horse Camp Creek to the Ellison Ranch: Scenic

11 miles from Ellison Ranch to Wilderness boundary: Recreational

1 mile from Salt River Wilderness boundary to Salt River: Wild

Managing Agency: Tonto National Forest

Private Land: Several ranches

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The scenery in the mid-section of the watershed is spectacular with towering cliffs from the Sierra Ancha Wilderness dominating the view. At creek level, bluffs and rock outcroppings occur at almost every bend in the river. This section of the creek is completely undeveloped, providing superior visual quality with no human intrusions.

Recreation: Due to the rugged terrain and dirt road access, the Cherry Creek watershed remains largely undeveloped and is excellent for dispersed recreation. Users swim, hike, hunt, fish, and birdwatch in this remote setting. Hunters find deer, quail, or javelina. Exceptional hiking is found along the creek or canyon slopes to ancient indian ruins.

Fish and Wildlife: Common wildlife found within the Cherry Creek watershed include javelina, coatimundi, Gila monster, bobcat, mule deer, mountain lion, hooded oriole, cottontail, vermilion flycatcher,

yellow warblers, whitetail deer, black bear, and turkey. Bald eagles have been sighted in lower Cherry Creek and nest in the adjacent Salt River Canyon. An ongoing study of peregrine falcon habitat is occurring in the mid-section of the creek.

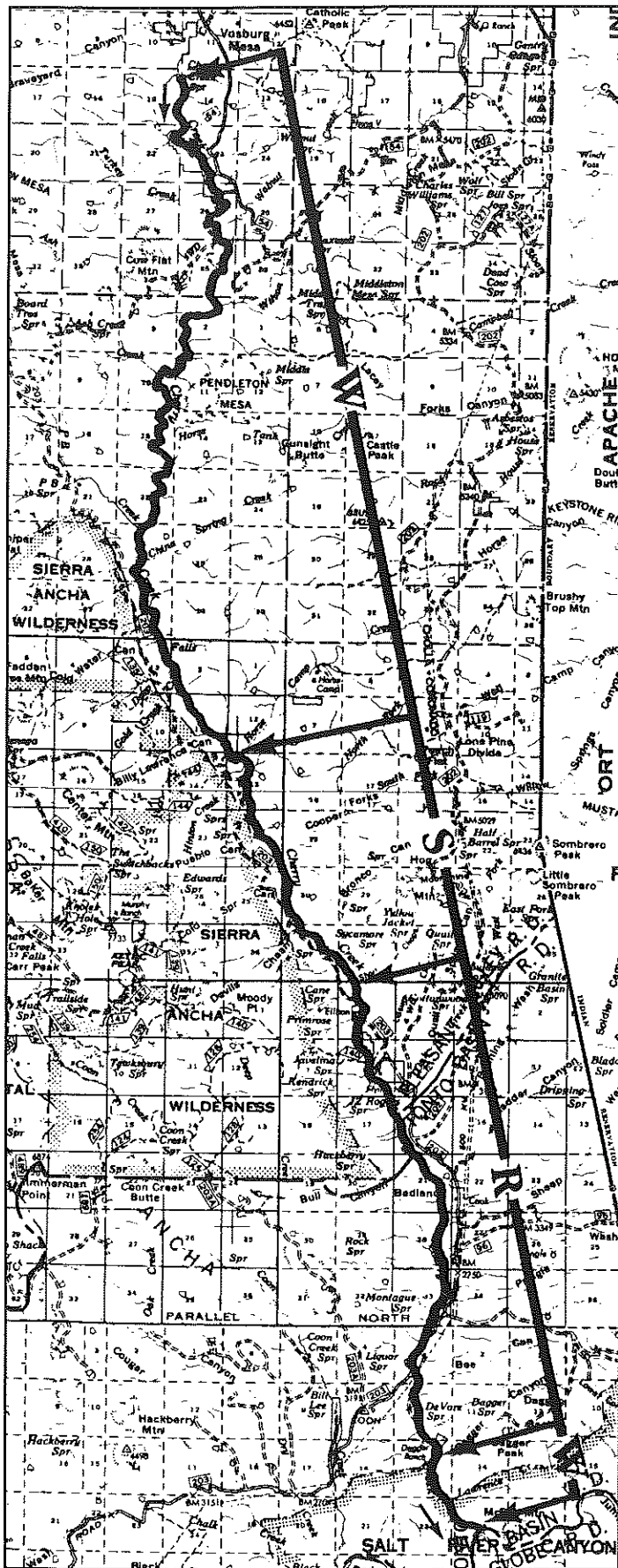
Many species found in the Cherry Creek watershed have special status. The roundtail chub, which occur in good numbers in Cherry Creek, is a state threatened species. The razorback sucker and the Colorado squawfish are currently being reintroduced into Cherry Creek, the first under full protection of the Endangered Species Act and the squawfish as an experimental/non-essential population. The Chiricahua leopard and lowland leopard frogs and narrow-headed garter snake are also found along the creek. The common blackhawk, peregrine falcon, Mexican spotted owl, California leaf-nosed bat, red bat, and the occult bat all have special species status and are known to live in the Cherry Creek area. The southwestern river otter was historically present.

Ecological: The closed canopy mixed broad-leaf deciduous riparian forest associated with portions of Cherry Creek provide nesting habitat for numerous pairs of common blackhawks. These riparian woodlands provide migration corridors for many species of neo-tropical migrants as well as nesting habitat for many species of obligate riparian nesting birds.

Cultural: Many well preserved archaeological sites have been found throughout the length of the creek. The middle portion was first studied in 1934, while the upper and lower reaches were studied in the 1970's. The Tonto National Forest is conducting an ongoing survey of the watershed and plans an interpretive signing project. Many cliff dwellings have been found made of masonry construction up to 20 rooms in size. Most ruins are 600-800 years old and are classified as Salado ruins.

OTHER CONSIDERATIONS

The management emphasis by the Forest Service is for a variety of renewable natural resources with primary emphasis on wildlife habitat improvement, livestock forage production, and dispersed recreation. Watersheds are managed so as to improve them to a satisfactory or better condition, with an emphasis to manage riparian areas to benefit riparian dependent resources. Wild and Scenic River designation will enhance these plans, preserve an important ecologic corridor, and help protect this area from gradual degradation by various human developments and off-road vehicle travel in the creek bed.



Map 4 - Cherry Creek

Coon Creek

Coon Creek begins at 6100 feet in the Sierra Ancha Wilderness, draining south to its confluence with the Salt River at about 2400 feet. This steep drop in a relatively short run has created a boxed-in canyon along the upper two-thirds of the drainage, while the lower third is surrounded by foothills. The creek begins in a coniferous forest and winds its way through communities of deciduous trees, pinyon-juniper, chaparral, to end in the Sonoran desert. The last mile of drainage flows within the Salt River Wilderness.

ARC RECOMMENDATIONS

9.5 miles from headwaters to confluence with Salt River as follows:

Headwaters to northern boundary of Armer Ranch: Wild
Armer Ranch to confluence with the Salt River: Scenic

Managing Agency: Tonto National Forest

Private Land: Approximately 10% owned by Charles Armer

OUTSTANDINGLY REMARKABLE VALUES

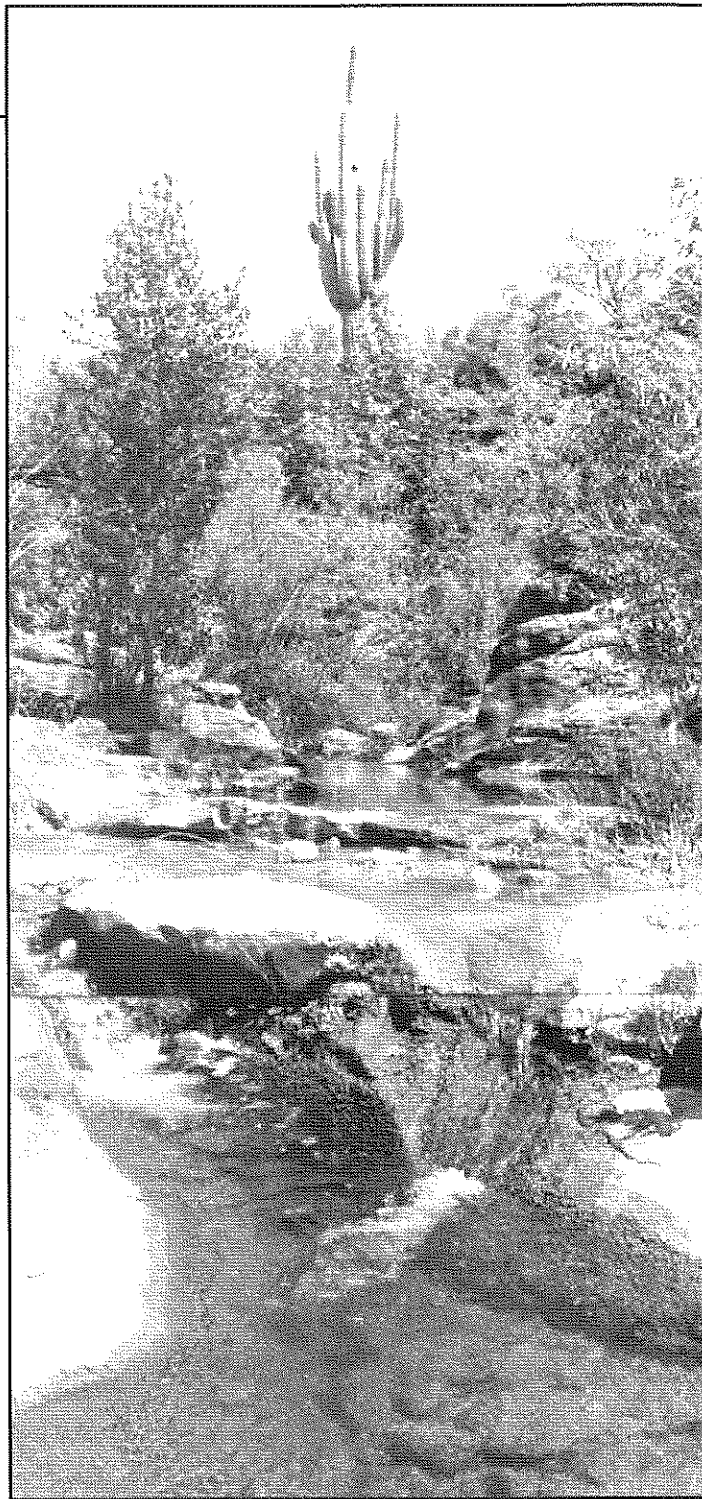
Scenic: Combining the many life zones along the creek with the fact that this area has not yet been severely impacted by man creates a pleasant visual experience. The steep canyons create breathtaking views and the mature stands of cottonwood, sycamore, ash, willow, and walnut trees are a joy to see in this arid country.

Ecological: Low human impact on the drainage has allowed for established varieties of riparian habitats to maintain populations. These varieties, along with the surrounding diversity of life zones, provide for a unique intermingling of species dependent on distinctly different habitat. This is best seen among bird populations. Many desert-adapted types use the drainage to travel to higher elevations, while upper elevation birds are often spotted along the creek. The zone-tail hawk has been documented nesting and foraging in the vicinity of this creek.

Cultural: There are fourteen recorded human-occupied sites along the creek, ranging in size from one to sixty-five rooms, including a cliff dwelling. Armer Ranch has buildings old enough that they may be considered historically significant, including a waterwheel and housing that was used to provide hydro-electric power to the ranch.

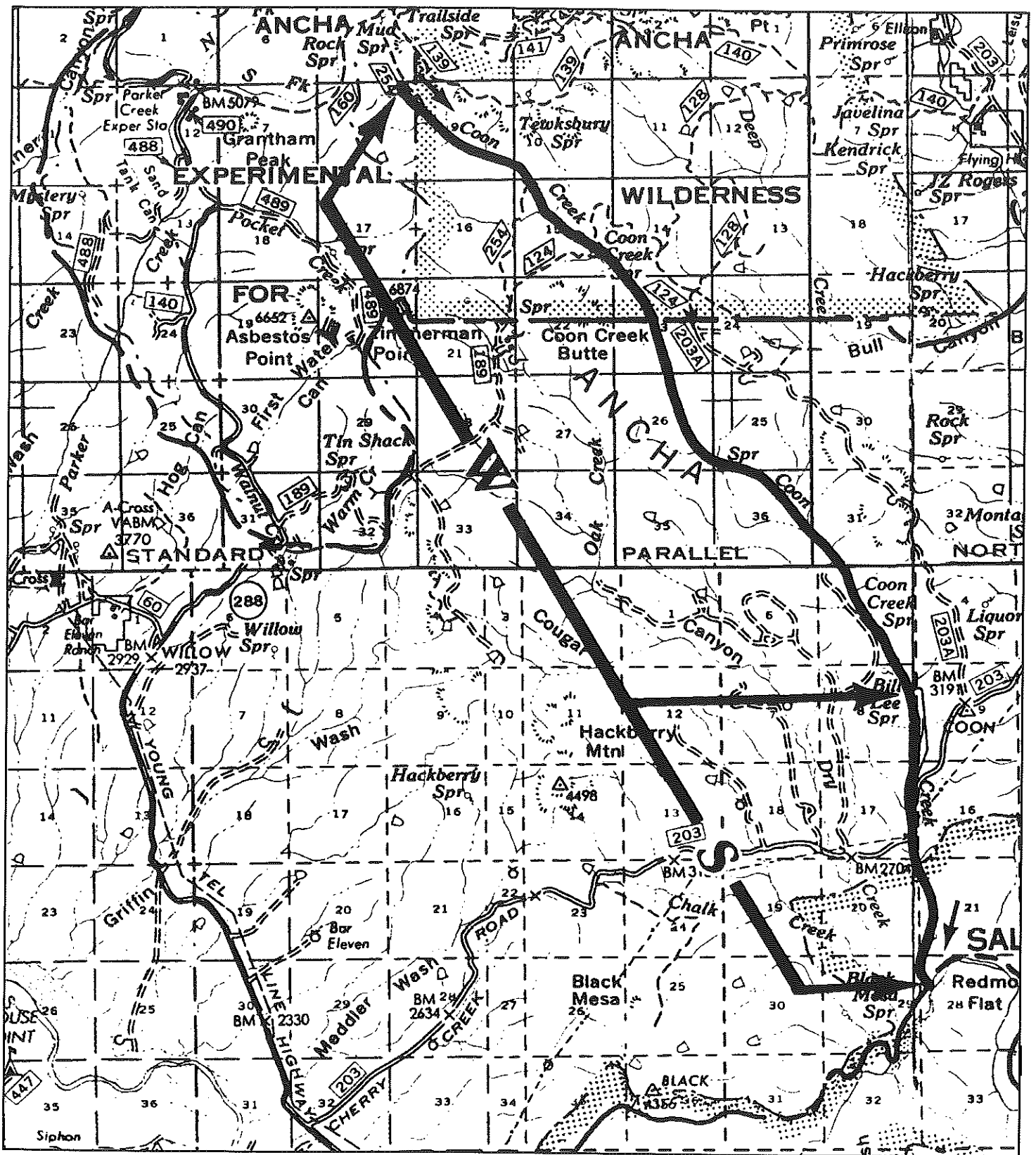
OTHER CONSIDERATIONS

Wild & Scenic designation for Coon Creek would guarantee protection of a waterway proven to be historically significant to Native Americans. This drainage has long been a corridor for movement from the lower elevation of the Salt River to the heights of the Sierra Anchas. Wild designation for the area upstream of the Armer ranch would aid in protecting this culturally rich drainage. Current access is by foot or horseback, and there has been minimal human impact.



COON CREEK (Photo: Roger Young)

Keeping this area permanently closed to cars and off road vehicles will lessen the chance of destruction of these significant sites.



Map 5 - Coon Creek

Pinto Creek

Pinto Creek is a perennial stream flowing north through Sonoran Desert habitat and ranging in elevation from 2,900 to 2,399 feet. Above the flood plain the dominant plant community is mixed paloverde-cacti. As described in a report published in the Journal of the Arizona Academy of Science this area "is a particularly rich community of desert plants exhibiting highly varied life forms." The streams flow is perennial due to the impermeable nature of the bedrock through which the drainage has cut. The drainage is so rugged, that impact by vehicles is virtually nonexistent; few people have ventured into this area.

ARC RECOMMENDATION

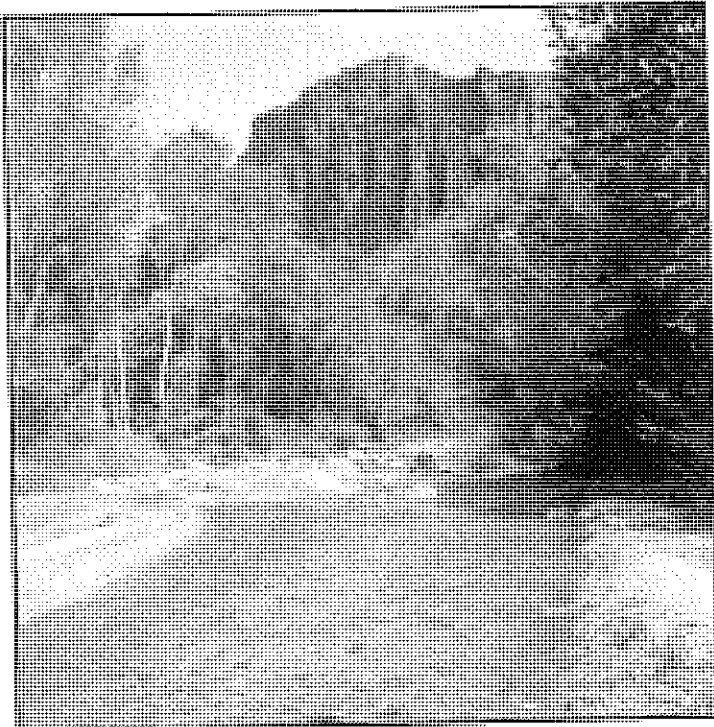
9 miles from the northern boundary of the Layton Ranch northwest of Miami to Highway 88 crossing near Roosevelt Lake:
Wild

MANAGING AGENCY: Tonto National Forest

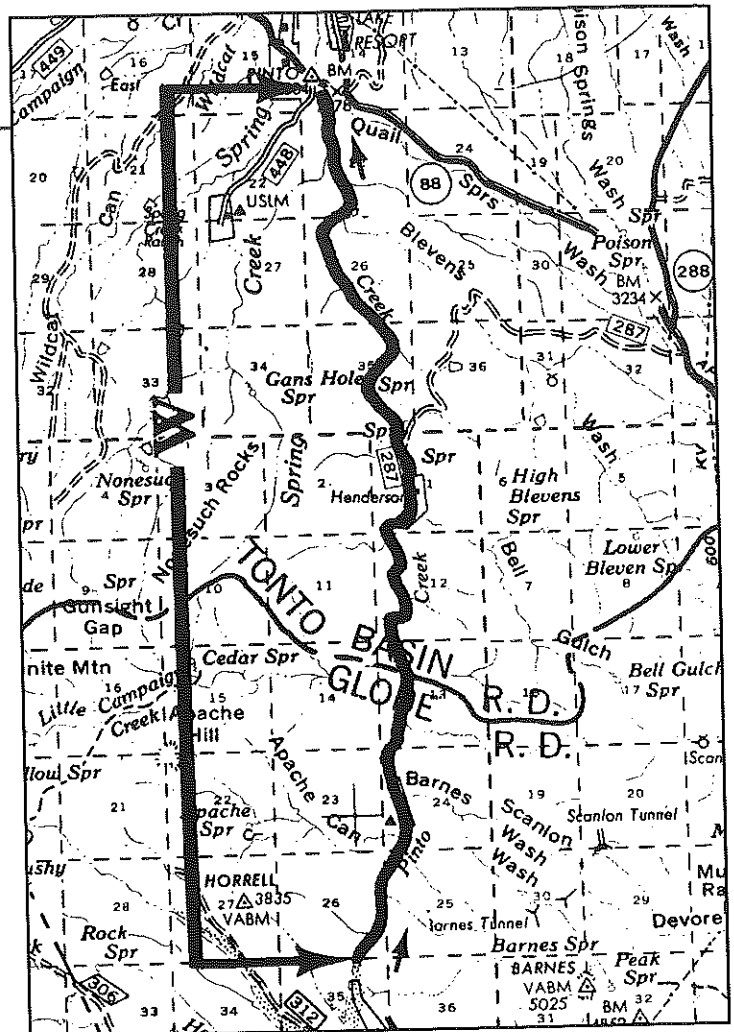
PRIVATE LAND: 7% of river mileage

OUTSTANDINGLY REMARKABLE VALUES

Ecological: The area under consideration is a small free-flowing stream surrounded by Sonoran desert habitat. The dominant riparian-dependent trees are sycamore, cottonwood, ash, willow, and walnut.



PINTO CREEK (Photo: Gail Peters)



Map 6 - Pinto Creek

The variety of wildlife, including four amphibians, three reptiles, six fish, diverse invertebrate fauna and vegetation that is dependent on this stream make it a valuable resource.

Cultural: There are four recorded human occupation sites in the proposed segment, ranging from evidence such as local artifacts to a four-room site.

OTHER CONSIDERATIONS

Pinto Creek is threatened by mining immediately upstream of the proposed segment. Mining wastes enter the stream, which in turn infiltrates Roosevelt Lake, a water supply for Phoenix. Currently the Pinto Valley Mine operations draw water from a well adjacent to the Layton Ranch. This well could pose a threat to the riparian zone immediately downstream along the creek. Pinto Creek is one of the few remaining streams with perennial water that flows through desert habitat. The Forest Service has recognized the value of the stream, calling it "the single best riparian habitat in the Tonto Basin." The importance of maintaining water flow is reflected by Tonto National Forest's application for a permit for in-stream water rights with the Arizona Department of Water Resources. To maintain this valuable ecosystem there must be guarantees for the amount and quality of water in Pinto Creek to remain at current levels.

Campaign Creek

The headwaters of Campaign Creek are in the Superstition Wilderness at an elevation of 5600 feet. The creek flows northeast until crossing under Highway 88 at 2300 feet. About half of the length of the creek is in the wilderness area, with the lower half paralleling the wilderness boundary until reaching the end of FS Road #449. The upper half of the drainage is in a Piñon-Juniper community while the lower half runs through chaparral, and eventually desert. Campaign Creek is an excellent example of the ecological functions of riparian habitats within a xeric environment.

ARC RECOMMENDATIONS

11 miles beginning at headwaters in the Superstition Wilderness, north to Cross P Ranch which is about 3 miles from Highway 88 on FS Road #449.

Headwaters to Reeves Mountain School: Wild
Reeves Mountain School to Cross P Ranch: Scenic

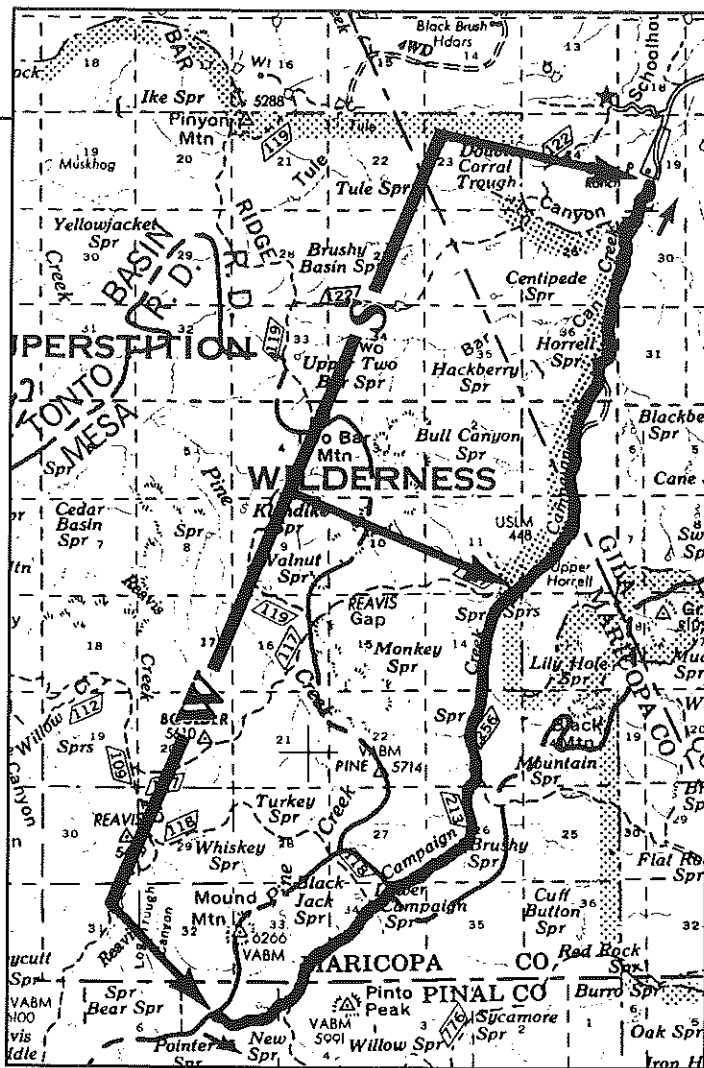
Managing Agency: Tonto National Forest

Private Land: Approximately 5% by Reeves Mountain School

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Upstream of FS Road #449, Campaign Creek is a roadless, cliff-dominated canyon, with waterfalls and plunge pools. Good riparian habitat exists in stretches with perennial flow. For a short section in the lower reaches the creek cuts a narrow canyon through granite hills. This area is referred to as "Deep Creek Canyon" and provides a chance to experience a steep-walled, deep-pooled desert canyon a few hundred feet from FS Road #449.

Fish and Wildlife: Varied micro-climates clustered within the canyon



Map 7 - Campaign Creek

allow for a diversity of wildlife not expected to be found in the same area as harsh desert landscape. Species vary from desert-adapted to riparian-dependent types. The Forest Service lists high wildlife habitat values for deer, javelina, lion and coatimundi in this area. Special species include a reintroduces population of the endangered Gila topminnow, lowland leopard frog, black hawk and Arizona Bell's vireo.

Cultural: The middle section of the creek has three recorded human occupation sites, including one large sixteen-room site. The lower area also has sites.

OTHER CONSIDERATIONS

Any water projects or dam along Campaign Creek would severely impact a federally endangered species of fish that lives in the stream. The Gila topminnow population here is considered the most viable in the Tonto Basin. The Forest Service considers the habitat excellent for this species, based on years of experience in a reintroduction program. Any degradation in water levels or quality would have a negative effect on the population. In recognizing the importance of this species we must also recognize the importance of its habitat. Inclusion in the Wild & Scenic River system would ensure special recognition of this rare ecosystem.



CAMPAIGN CREEK (Photo: Roger Young)

Salome Creek

The proposed segment of Salome Creek, including its headwaters in Turkey Creek, flows 20 miles from an origin near McFadden Peak in the Sierra Ancha Mountains down to FS Road #60. The end of the proposed segment is above Tin Hat Ranch, north of the creek's mouth at Roosevelt Lake. Except for a small, three-quarter mile segment of private land already contained within the existing Salome Wilderness Area, the entire proposed segment is held by the Tonto National Forest. A few fences for control of cattle are the only man-made structures on the proposed stream segment. The creek flows perennially through much of the wilderness, and intermittently in the remainder.



SALOME CREEK (Photo: Tim Flood)

ARC RECOMMENDATION

20 miles from headwaters of Turkey Creek (northeast of McFadden Peak) and the Salome Creek mainstem down to Tonto FS Road #60: Wild

MANAGING AGENCY: Tonto National Forest

PRIVATE LAND: 0.75 river miles, undeveloped

OUTSTANDINGLY REMARKABLE VALUES

Scenic: A magnificent, deep, wild canyon is cut by the creek as it tumbles from its origin at 7,000 feet to the desert floor at 2,500 feet. The upper portion of the proposed segment consists of ponderosa pine, scrub oak, pinon, and juniper forests. As it exits the wilderness area the creek has carved an outstanding, mile-long, granite gorge. Other notable scenery include a canyon named The Jug, colorful Dutchwoman Butte, and the marvelous contrast of a cottonwood riparian zone immediately flanked by saguaro cacti.

Recreation: Opportunities include hiking, backpacking, birding, nature watching, and hunting. The creek is not navigable, but there are numerous pools that draw many enthusiasts for a refreshing swim. Only three trails cross the stream; these are above the wilderness boundary, in the upper segment. The creek corridor is remote and offers excellent opportunities for solitude and quiet.

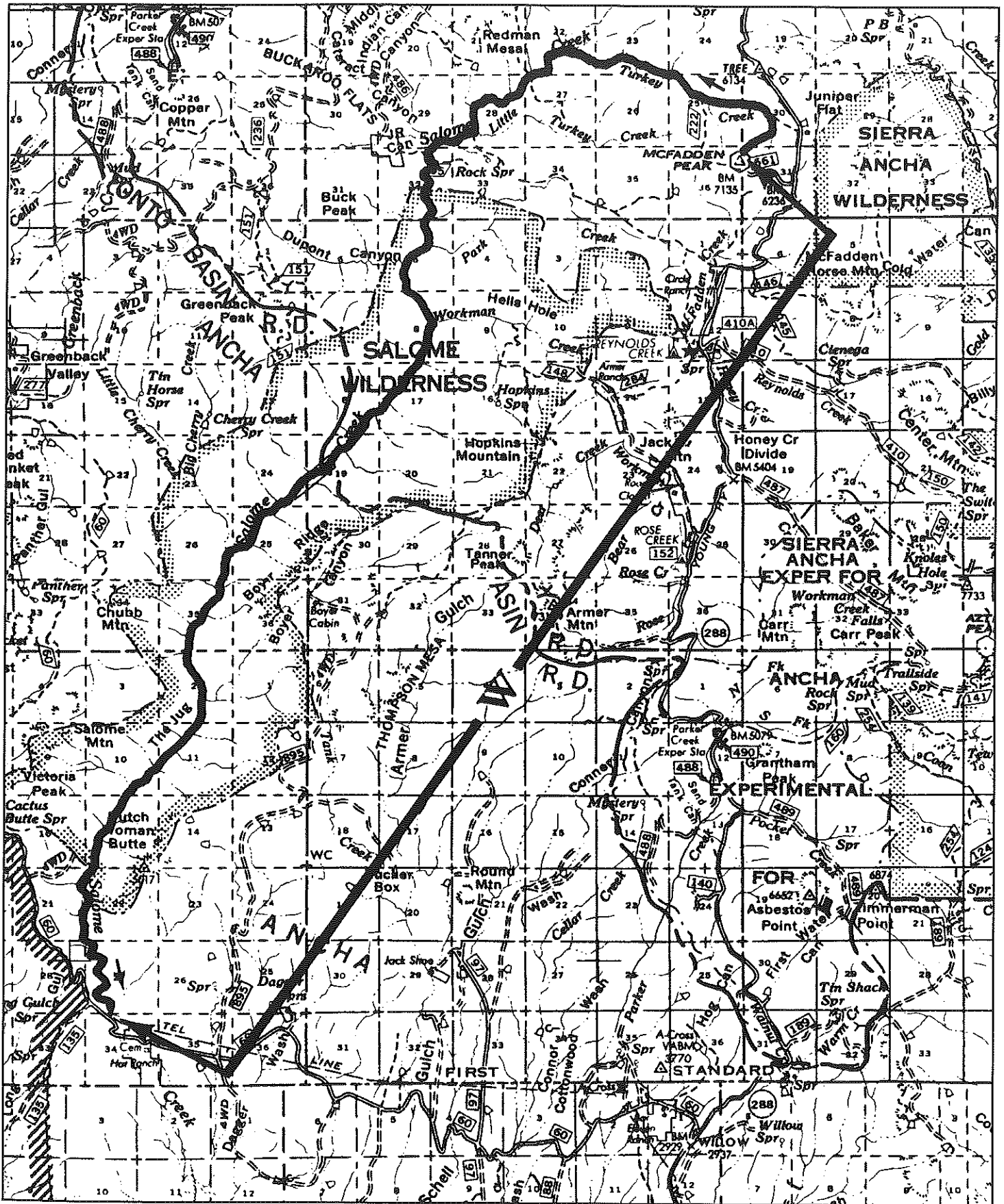
Geologic: Eons of flash floods have carved and polished a one mile long, 200-foot deep, narrow gorge of pink granite at the segment exiting the wilderness area. This labyrinthine channel with its clear pools is a popular destination for an increasing number of visitors.

Fish and Wildlife: Pools and runs of dependable water on Salome Creek provide one of the important ecological corridors for wildlife

near the Tonto/Salt River basin. This wildlife includes deer, bear, javelina, mountain lion, great blue heron, hawks, the state-protected Gila monster, minnows, frogs and toads. The candidate roundtail chub is present in unknown numbers in some of the deeper pools. Detailed biological surveys have not been performed, but it is likely that the isolated riparian zone fosters special species.

OTHER CONSIDERATIONS

Wild and scenic river designation of Salome Creek is recommended to ensure permanent protection of all its outstandingly remarkable riparian qualities. Increasing recreational pressures on the north side of Roosevelt Lake require the special management that accompanies designation. No conflicts for designation are known. Designation will complement the existing wilderness designation and give a strong legislative mandate for management of the creek. It is highly deserving of placement into the national system.



Map 8 - Salome Creek

Salt River (lower)

The Salt River in this reach traverses a wide range of terrain from high cliffs to low areas of mesquite forest and Sonoran Desert foothills. This area of the river is heavily used for recreational purposes in the summer months by residents of Phoenix and surrounding Maricopa County. Despite this recreational use, it is home to a variety of animals and plants including stands of old-growth cottonwoods, saguaros, numerous amphibians, reptiles, bats, and the endangered bald eagle. Four dams were build on the Salt River between 1913 and 1947, the lowermost of which, Stewart Mountain Dam, controls discharge in this reach of river. Other than infrequent flood flows, discharge is lowest in winter and maximal in spring and summer.

ARC RECOMMENDATION

11.5 miles from Stewart Mountain Dam to Granite Reef Diversion Dam: Recreational

MANAGING AGENCY: Tonto National Forest

PRIVATE LAND: Salt River Indian Reservation

OUTSTANDINGLY REMARKABLE VALUES

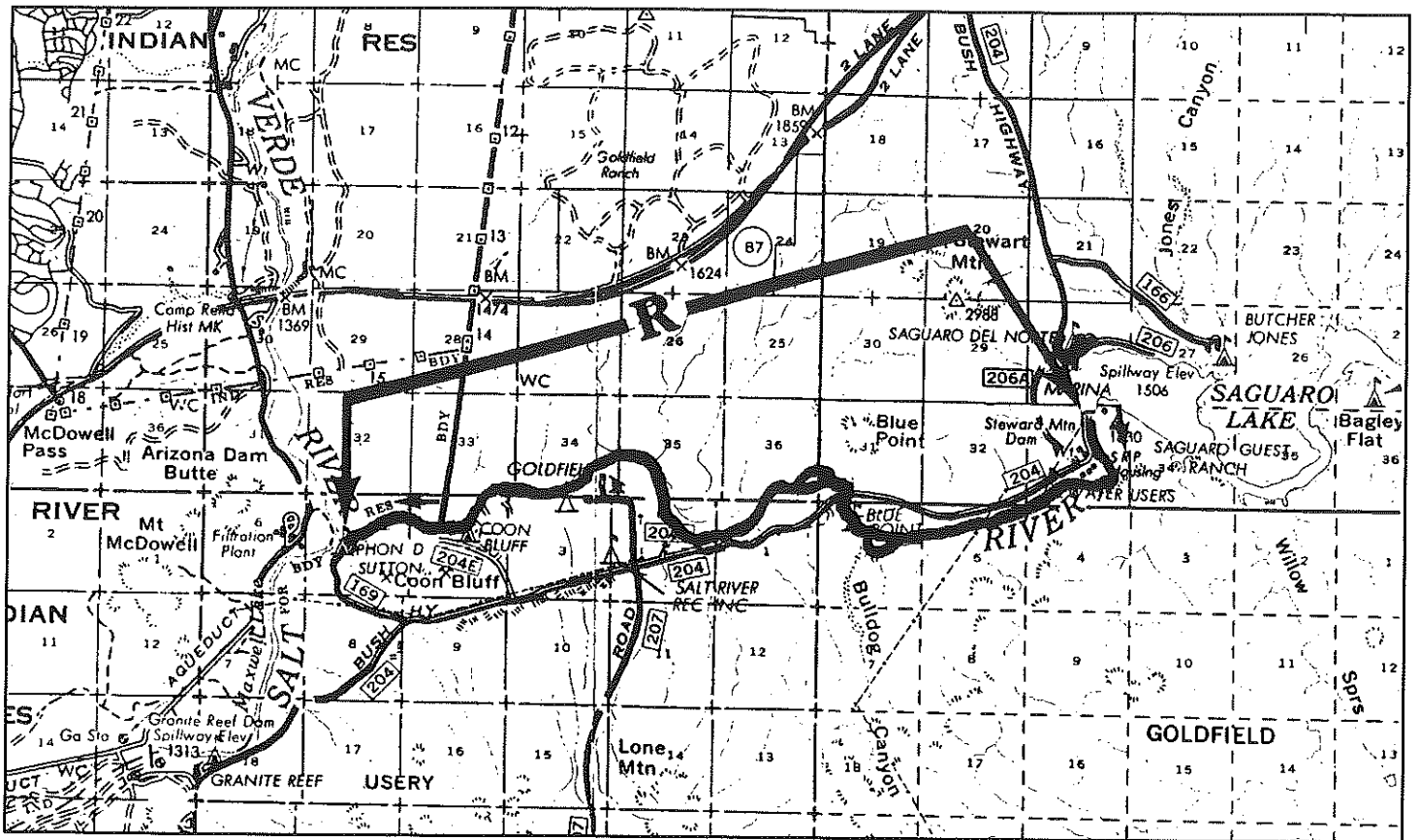
Scenic: This stretch of the river passes through the Goldfield and Usery Mountains. The vegetation is typical of Sonoran desert and Sonoran foothills life zones. The riparian area is composed of communities of cottonwood and willow, salt cedar, arrow weed, and mesquite.

Recreational: The prime recreational use is a sport called "tubing", where people use automobile tire tubes as flotation devices. In 1989 an estimated 118,000 people used the tubing shuttle service operated under permit by the Forest Service. Countless more used the river by bringing their own tubes and transportation, and the district ranger's report estimated more than half a million recreational visitor days for uses other than tubing. These uses include fishing, bird watching, archeological exploration, backpacking, and nature study.

Geologic: The floodplain and terraces that surround the river are primarily of igneous Precambrian rock, sedimentary Precambrian rock and volcanic tertiary rock. The most common minerals found among



SALT RIVER — LOWER (Photo: Debs Metzong)



Map 9 - Salt River (lower)

these layers are orthoquartzite and rhyolite.

Fish and Wildlife: Both wintering and nesting bald eagles and peregrine falcons are found along this stretch. The abundant water, desert plains and surrounding mountains allow for a diversity of wildlife that is seldom seen, particularly so close to a major metropolitan area. This region is home to many large mammals including mule deer, coyotes, javelina, bobcats and foxes. Small mammals such as jackrabbits, cottontails, packrats, kangaroo rats, and at least 12 different types of bat depend on the river. Bird species are abundant, including the Harris hawk, Cooper's hawk, great horned owls, and the great blue heron. The endangered Yuma clapper rail lives among the remaining marsh areas of the river. The lower Salt River provides habitat for migrating and wintering waterfowl and shorebirds as well as nesting habitat and migration corridors for numerous neo-tropical migrants. Fish life includes sport fish like trout, bass and bluegill, and also includes native minnows and suckers.

Cultural: Many prehistoric Amerind sites have been identified along the Salt River in this region. They are mainly associated with the Hohokam-Salado occupation from around 300 B.C.

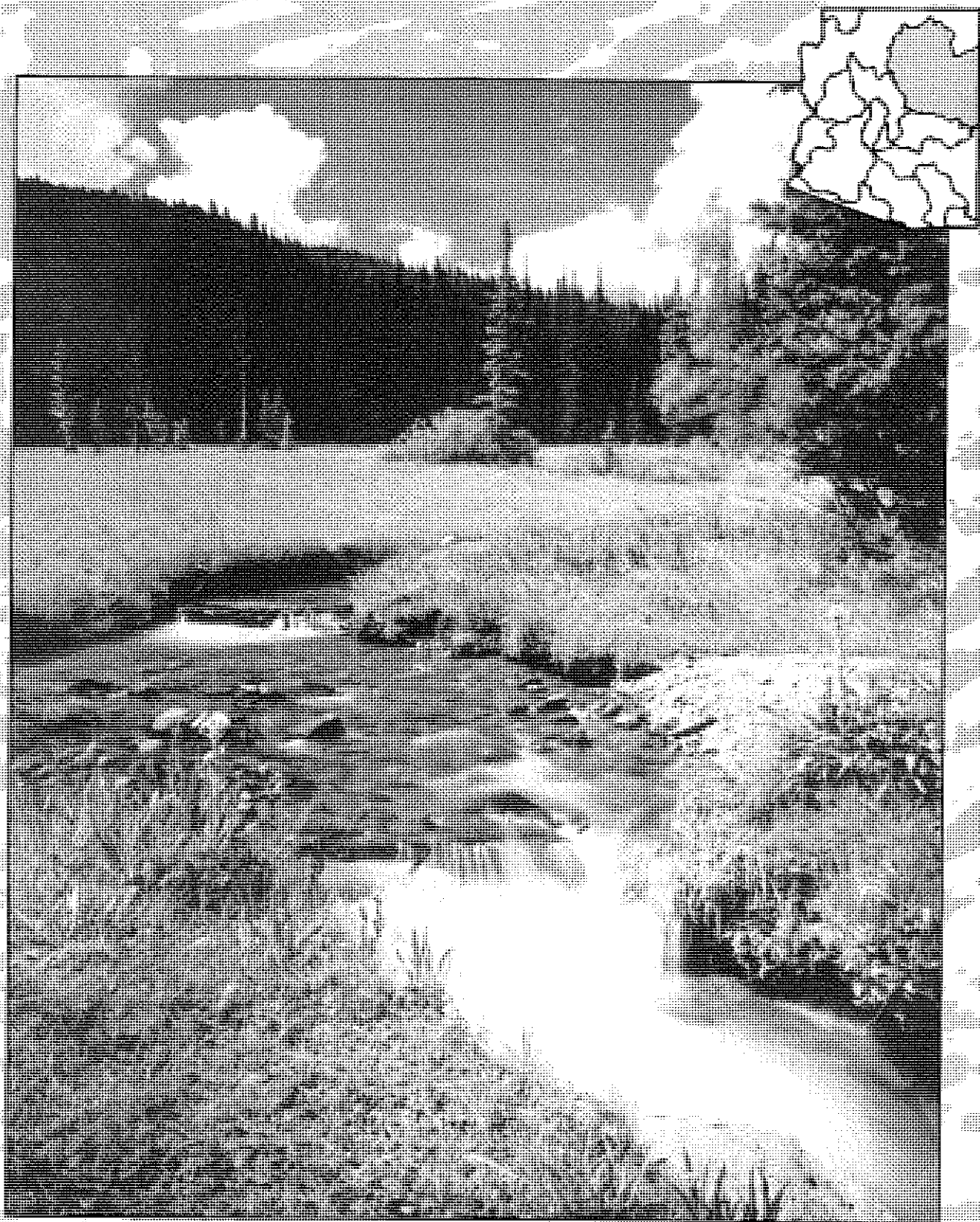
OTHER CONSIDERATIONS

In recognizing the importance of this riparian area Salt River Project, which controls the flow out of Stewart Mountain Dam, has agreed to maintain adequate discharge in winter months so that downstream riparian habit is maintained in a somewhat stable condition. Besides the outstanding recreational value, this segment of the river also has high educational value. It is in close proximity to Arizona State

University and is used for both biology and geology classes. Several Maricopa County Community Colleges also study the flora and fauna of the area, both those beside the river and those dependent on the river for water.

This segment of the Salt River, known locally as the "Salt tubing run," is one of the most popular recreational spots in the state for the local population. It is also as near that many urban Phoenicians may ever get to a desert riparian area. Designating this segment as a recreational wild and scenic river would guarantee the continued access to this area. Such designation will put aside threats of inundating the area with new dams. This is a stretch of river that can be enjoyed by all of Arizona's families.

LITTLE COLORADO RIVER BASIN



LITTLE COLORADO RIVER, WEST FORK (Photo: Dale Schickel)

Little Colorado River (West Fork)

The headwaters of the Little Colorado River are in the White Mountains in eastern Arizona in the Mt. Baldy Wilderness, one of the smallest but most pristine wilderness areas in Arizona. From headwaters near 12,000 feet, this pretty creek flows through forests of Colorado blue spruce, white fir, corkbark fir, ponderosa pine, white pine, and quaking aspen, and cuts through hundreds of feet of volcanic rock formations. Near Sheep Crossing, the creek leaves the wilderness area and flows through lush meadows seasonally laced with many wild flowers. West Fork of Little Colorado River provides a high quality semi-primitive water-based recreation area adjacent to the popular resort community of Greer.

ARC RECOMMENDATIONS

From the headwaters to the confluence with South Fork, excepting the River Reservoir north of Greer as follows:

From headwaters on Mt. Baldy to Greer: Wild

Through Greer: Recreational

Greer to confluence with South Fork: Scenic

MANAGING AGENCY: Apache-Sitgreaves National Forest

PRIVATE LAND: Less than 20%

OUTSTANDINGLY REMARKABLE VALUES

Scenic: This delightful creek is one of the most scenic in the state as it flows through some of the highest elevations in Arizona. The ecological setting of the West Fork of the Little Colorado River combines the perspectives associated with the scenic, recreational, and fish and wildlife values. The waters of the stream are the ecological focal point of many unique features associated with the White Mountains. Wet meadows, Arizona willow stands, willow-dogwood associations and forested slopes above the stream channel are all part of a complex functioning ecosystem. This stream is an example of the vast diversity that Arizona has to offer.

Recreation: Anglers enjoy the excellent variety of trout. The trail from Sheep Crossing to the Mt. Baldy summit is one of the most popular summer hikes in Arizona. The hike takes you from level alpine meadows, through spruce forests to Baldy Peak, where on a clear day you can see halfway across the state.

Geologic: Mt. Baldy itself is an extinct volcano, a remnant of a broad Tertiary lava cone 4-15 million years old. Most of this ancient dome has since been eroded away, both by water and by glaciers. The area has many lovely meadows typical of glaciated areas.

Fish and Wildlife: The fragile riparian and aquatic habitats associated

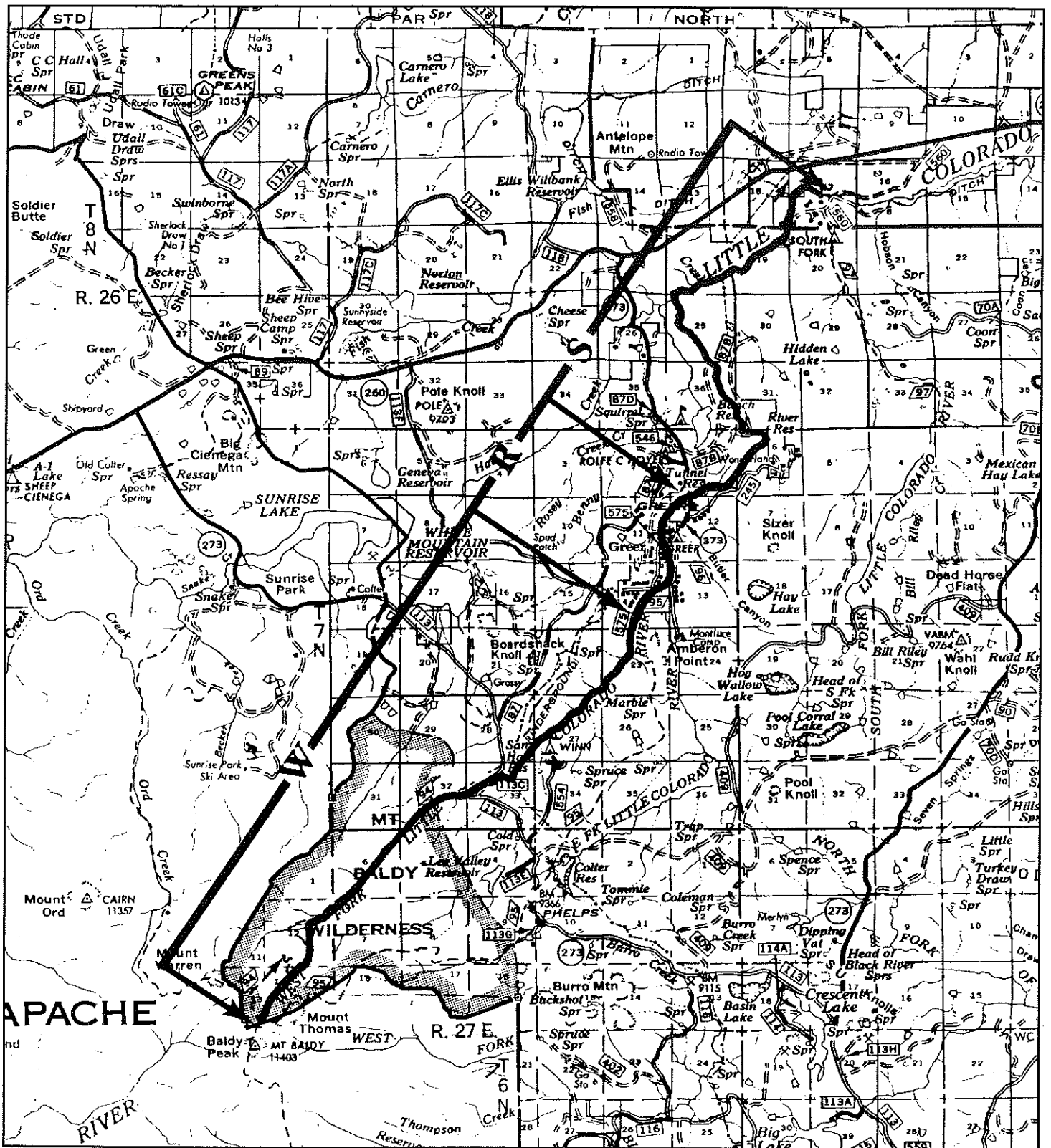
with the river support several special status species of plants and animals. Among the stream-side vegetation are several species of plants endemic to the White Mountains, including Arizona willow, White Mountain paintbrush and Goodding's onion. The stream-side herbaceous growth and undercut stream channels provide the special habitats required of the jumping mouse and water shrew. These animals are lost with degradation of riparian areas. The riparian scrub habitats near Greer provide nesting habitat for the Veery, American redstart, gray catbird and willow flycatcher. These are unique assemblages of species of plants and animals only to be found along the West Fork of the Little Colorado River. The Mexican spotted owl is thought to use the drainage as a nesting area. Bald eagles are known to use the area to winter, while in summer months osprey are often seen. The lower elevation is home to Rocky Mountain elk, black bear, mule deer, porcupine, wild turkey, blue grouse, and a few colonies of beaver.

Cultural: Prehistoric ruins along canyon walls from the Mogollon culture are along the river, although this area has not yet been surveyed.

OTHER CONSIDERATIONS

Timber harvesting is not allowed in this area except for special situations such as insect and disease control.

The Little Colorado River is a must for wild and scenic river designation, if for no other reason than it is so unexpected in Arizona. This charming creek flows through one of the finest high elevation riparian zones in the state. With tourism as the number one industry in the area, designation would be compatible with uses of the river. Management agreements between the Forest Service and communities could allow for a plan to assure water supply for agriculture and local use, promotion of tourism, and greenbelts through the communities. The headwaters of the longest river beginning and ending in Arizona deserve special protection for the unique qualities provided to this part of the state.



Map 10 - Little Colorado River, West Fork

Chevelon Creek

Chevelon Creek begins as two separate streams, Woods Canyon Creek and Willow Springs Canyon Creek. These two streams are dammed in their upper reaches to form recreational lakes. Downstream of these dams, the streams run free and join to form Chevelon Creek. Chevelon is a very wild and scenic stream running through a steep, narrow, twisting canyon. The canyon bottom contains a riparian area virtually undisturbed by human activity. Upper reaches of the canyon contain mixed conifer and Ponderosa Pine forests; lower reaches contain Pinyon-Juniper type forest. The creek is dammed at one point, forming Chevelon Lake. There is only one road crossing, at Chevelon Crossing. Below this point the creek is intermittent. Elevation within the proposed segment ranges from 7500 feet to 6000 feet.

ARC RECOMMENDATIONS

38.5 miles of stream from below Woods Canyon Dam and Willow Springs Canyon Dam to north boundary of Apache-Sitgreaves National Forest as follows:

Section above Chevelon Lake: Wild

Chevelon Lake to Forest boundary: Scenic

Downstream, or north, of the proposed segment, Chevelon Creek becomes increasingly narrow and steep-walled with tortuous curves. Land ownership is a checker board of state and private. This section of Chevelon Canyon has significant riparian habitat with walnuts, hackberry and willow. Before the last few miles of the creek are dammed at its confluence with the Little Colorado River, the threatened Little Colorado spinedace is consistently found. This lower end of Chevelon Creek provides some of the best habitat known for the spinedace and has been designated Critical Habitat under the Endangered Species Act. ARC would like to pursue further study and conversations with the landowners to determine feasibility of designating the entire length of the Creek due to the significance of the creek to riparian and wildlife values.

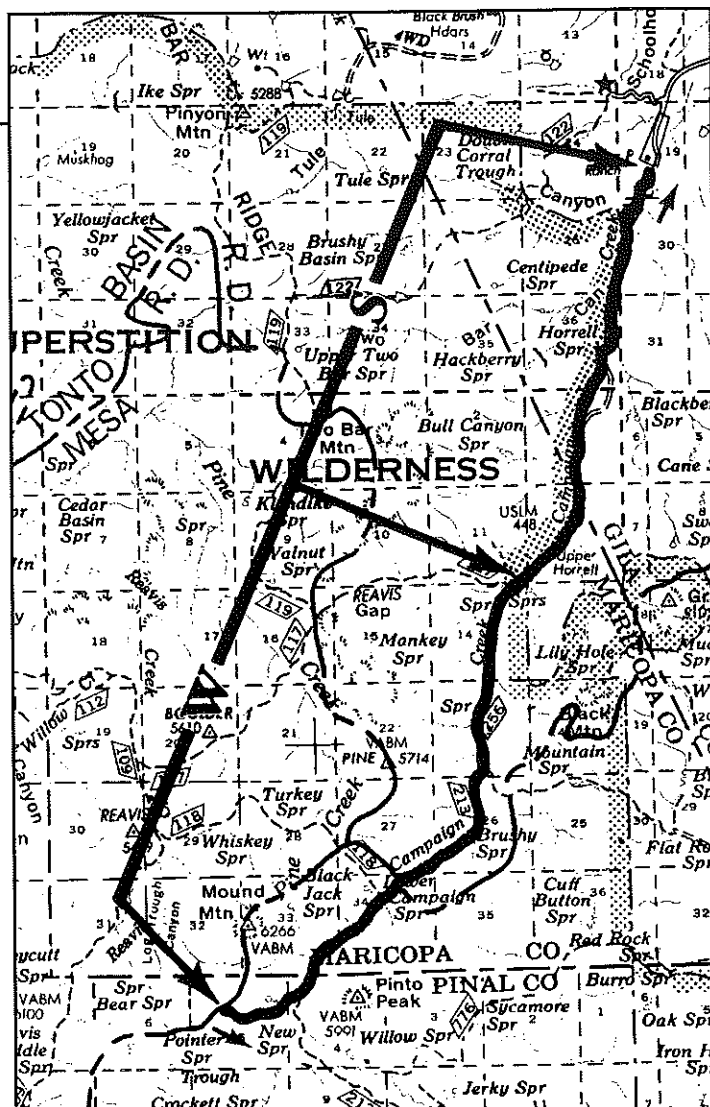
MANAGING AGENCY: Apache-Sitgreaves National Forest

PRIVATE LAND: None, however, see paragraph above.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The creek has carved a deep, narrow, twisting canyon into the landscape. The steep terrain and limited access into the canyon have kept human intrusion to a minimum. The primary scenic features are located in the primitive, steep-walled and twisting canyon, with cliffs rising as much as 300 feet above deep pools in the stream channel.

Recreation: The creek area offers a primarily primitive recreation



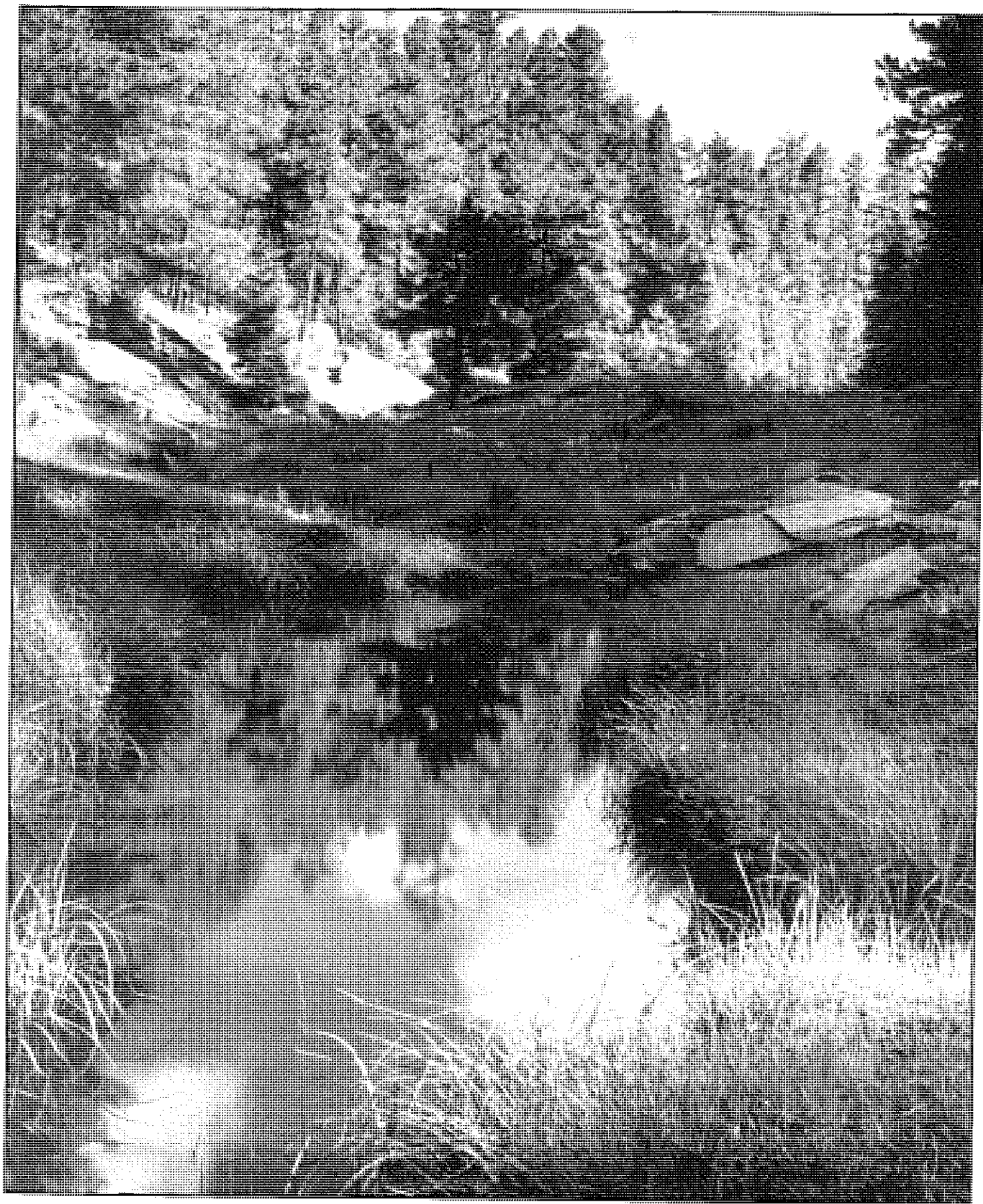
Map 11 - Chevelon Creek

experience due to the remoteness of the canyon. Hunting, backpacking, swimming, picnicking and fishing are all available to the adventurous. Access is through hiking or horseback.

Geologic: The main geologic feature is the stream canyon which cuts a twisting and steep-walled course through a relatively gentle overall landfall.

Fish and Wildlife: The canyon is home to a number of threatened and endangered species including the roundtail chub, the Mexican spotted owl, wintering bald eagles, and the peregrine falcon. Other rare bird species that live here are the osprey and the belted kingfisher. Overall the canyon contains almost 200 known vertebrate species, with more than 50 percent dependent for at least part of their life cycle on riparian associations. The flow originating in the proposed segment eventually supports critical habitat for the Little Colorado spinedace downstream near the confluence with the Little Colorado River.

Ecological: The riparian zone is in excellent condition due to the fact that the canyon bottom has not been grazed by livestock for many years. Due to the steepness and depth of the canyon, the canyon bottom and the slopes above the stream have never been logged. The



CHEVELON CREEK (Photo: Dale Schicketanz)

canyon contains some remarkable stands of old-growth mixed conifers and ponderosa pine.

Cultural: There are a number of archeological sites in Chevelon Canyon. The area saw fairly continuous use from 4000 years ago up to 800 years ago. The Eastern Sinagua people inhabited the canyon as long as 2000 years ago. Corn and other crops were grown in the canyon. Evidence of these people remains in the canyon in the form of rock art and rock shelters. A very large rabbit net, 140 feet long, woven out of human hair was recently found in the canyon.

Evidence of more recent occupation includes the foundations of a Civilian Conservation Corps camp on the canyon rim near Chevelon Crossing.

OTHER CONSIDERATIONS

The U.S. Forest Service recognizes the importance of Chevelon Canyon. The stream is recommended for inclusion in the Wild and Scenic River System in the Apache-Sitgreaves forest plan. Except for Chevelon Lake and limited development in the area of Chevelon Crossing, the canyon remains a highly primitive and remote area. The upper canyon is one of the most remarkable wild areas in the rim country. It is very unexpected in the midst of the relatively flat high plateau on top of the Mogollon Rim. The canyon provides outstanding opportunities for solitude and escape from the crowds that pass by on the way to better known recreational areas.

East Clear Creek - Barbershop Creek

East Clear Creek flows north off the Mogollon Rim through a steep, rocky channel lined with pine forest. Barbershop Creek is the free flowing, 14 mile southern fork and headwaters of East Clear Creek, meeting the main creek near Forest Road #95. East Clear Creek continues through a scenic, deep canyon dropping into a pinyon-juniper woodland. Deep, clear pools abound as the creek flows northward to the Little Colorado River through a tortuous and colorful rocky canyon.

ARC RECOMMENDATIONS

14 miles of Barbershop Creek and 65 miles of East Clear Creek from Barbershop Creek to the reservoir near Winslow.

14 miles of Barbershop Creek: Wild

East Clear Creek from Barbershop Creek to the forest boundary: Scenic

Forest boundary to Clear Creek Reservoir: Recreational

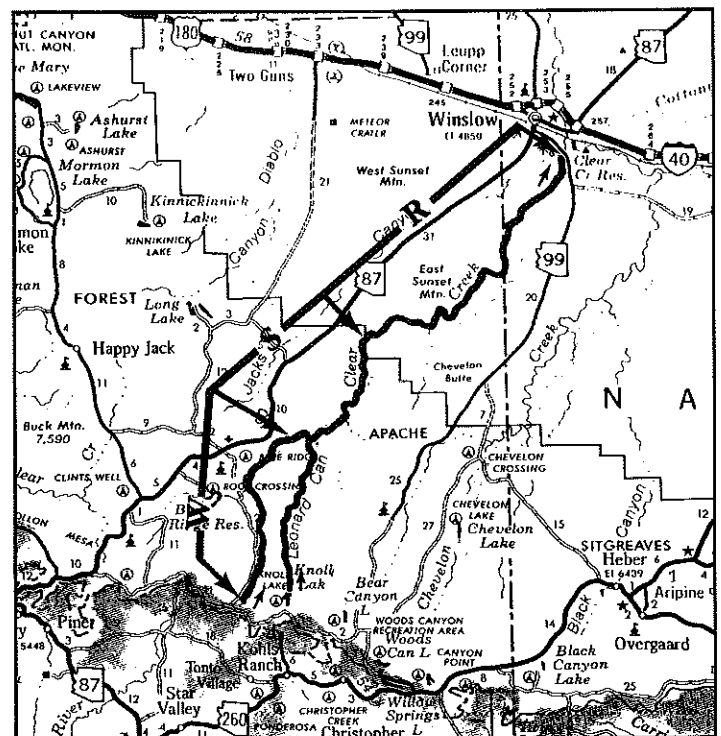
MANAGING AGENCY: Coconino and Apache-Sitgreaves National Forests and Arizona State Land Department.

PRIVATE LAND: 2 land owners plus Phelps Dodge.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: East Clear Creek is a wild, deep canyon with incredible rocky cliffs towering over a free flowing stream. Riparian vegetation snakes alongside the stream which is confined in a narrow canyon bottom. Beginning in the high elevations of the Mogollon Rim surrounded by pines, firs, and maples, East Clear Creek eventually winds through the wide open spaces of the high Colorado Plateau before joining with the Little Colorado River.

Barbershop Creek begins at the edge of the Mogollon Rim at 7000 feet and is a pristine deep canyon free from intrusions. Mixed conifer



Map 12 - East Clear Creek - Barbershop Creek

and ponderosa pine forests dominate with aspen and oak mixed in. The canyon becomes quite steep within a mile of its beginning, exhibiting spectacular layered rock formations. The riparian corridor is in a highly primitive and pristine condition.

Recreation: Recreational activities include hiking, backpacking, fishing, trail riding, and nature study. Because of the remote, inaccessible nature of the area, recreational opportunities are mostly primitive, backcountry experiences.

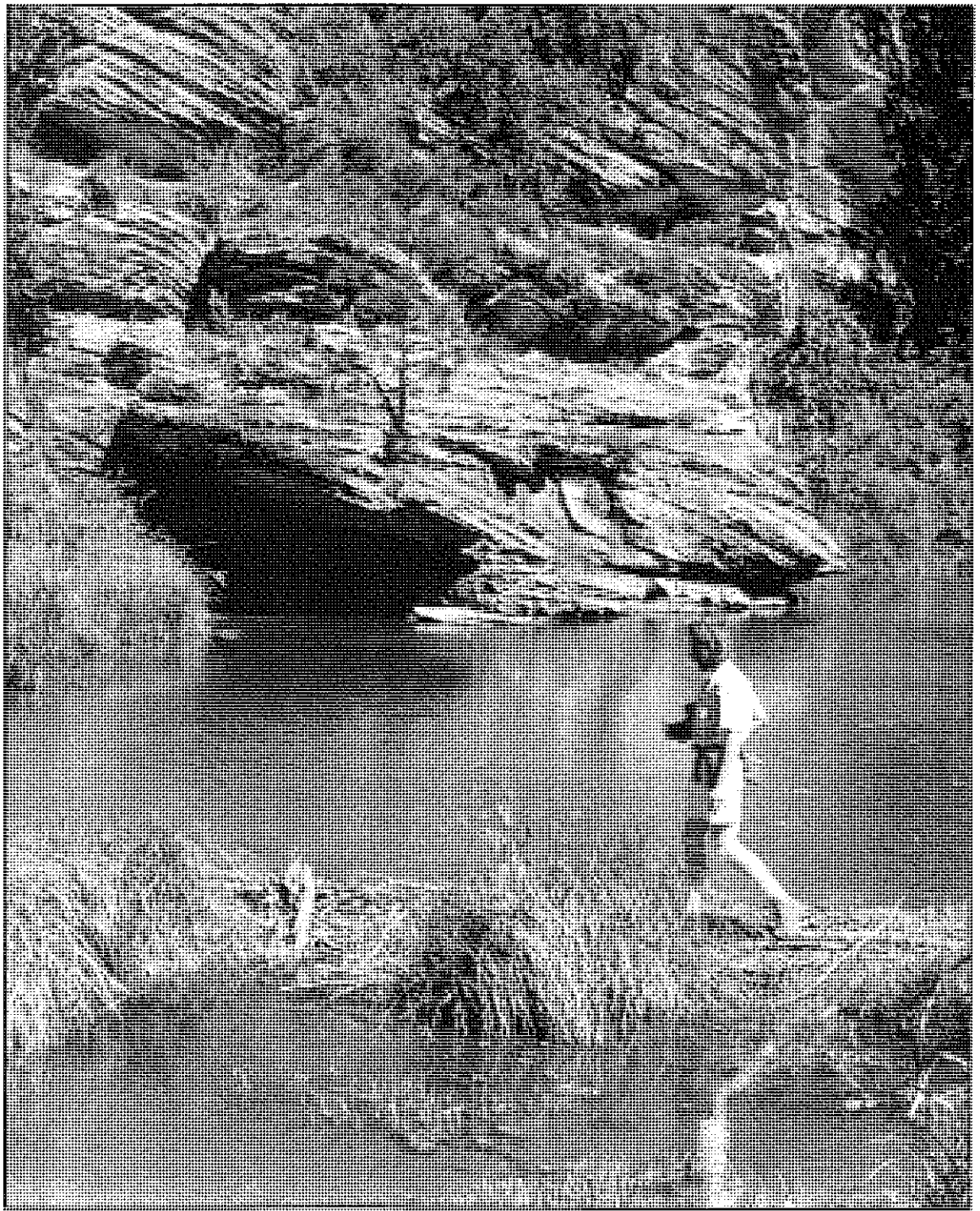
Geologic: The creek flows northeast off the edge of the Mogollon Rim, across the upper surface of the Colorado Plateau. The stream is representative of plateau streams in the Four Corners area - it has a gorge up to 800 feet deep that reveals in cross section typical plateau rocks. The Kaibab Limestone forms sharp angles and cliffs, while the

Coconino Sandstone forms cliffs with well-defined crossbedding derived from sand dunes which were active before they were cemented into rock.

Fish and Wildlife: The area is home to many forest species including black bear, mountain lion, bobcat, elk, turkey, and mule deer. Species found in the area that are on the Federal threatened and endangered species list include the Little Colorado spinedace, Mexican spotted owl, Arizona southwestern toad, Mogollon thistle, Mogollon columbine, Chiricahua leopard frog and osprey.

Ecological: The narrow, steep canyons that flow north from the Mogollon Rim are important ecological systems to the wildlife that inhabit the region. The riparian zone of East Clear Creek provides excellent habitat. Dominant overstory vegetation includes New Mexico locust, bigtooth maple, willows, and walnuts.

This rugged, steep canyon has not been heavily logged or grazed due to its severe topography. This has left the riparian corridor in pristine condition.



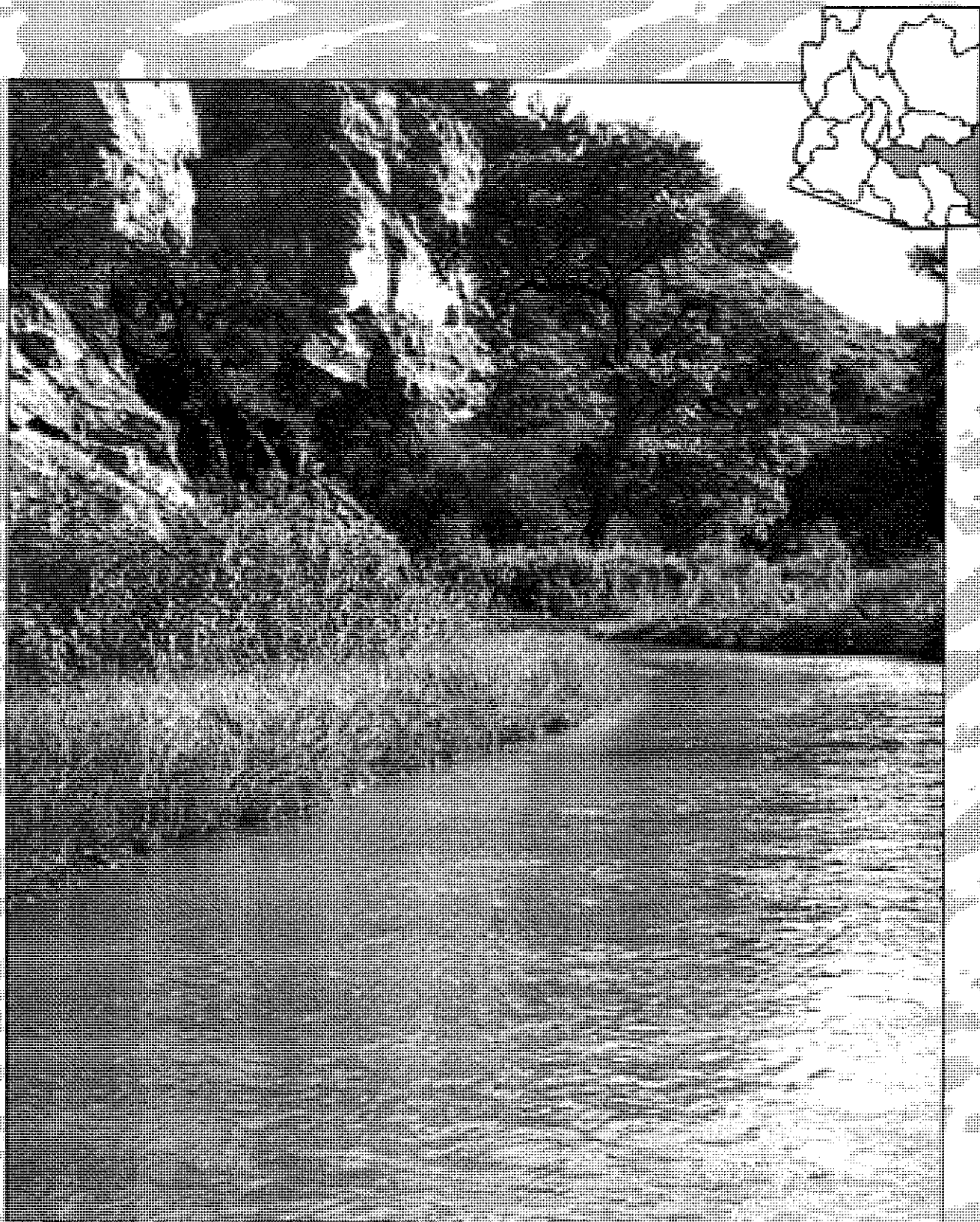
EAST CLEAR CREEK (Photo: Dennis Roshay)

OTHER CONSIDERATIONS

East Clear Creek and Barbershop Creek are unique even among Arizona's free flowing rivers. Rim country climate, ecology, and topography result in outstandingly remarkable scenic, recreational, geologic, fish and wildlife, and ecological values as the creeks flow from the pine, aspen, spruce, and fir covered headwaters above 7000 feet to the desert grasslands near Winslow. The low base flow of these creeks make them susceptible to upstream water development or impoundment, as demonstrated on East Clear Creek above the Barbershop confluence by the impact of the dam at Blue Ridge Reservoir. Wild and Scenic designation will guarantee the protection

and management necessary to protect the unique, free flowing character of this watershed, and fulfill the intention of the Act by offsetting the impacts of existing dams in the area.

UPPER GILA RIVER BASIN



San Francisco River (Photo: Tom Farnsworth)

Blue River

Blue River, on the eastern edge of the White Mountains, forms a rugged canyon as it cuts through the Mogollon Rim, forming numerous narrow steep walled canyons. With elevations ranging from 4500 feet up to 9200 feet, the Blue Range watershed exhibits a very wide spectrum of vegetative life zones which are continually interspersed and visually overwhelmed by colorful and magnificent rock formations. The mainstem of the Blue flows through the heart of the Blue Range Primitive Area which is one of the most prized backcountry resources in the Southwest, if not the country.

ARC RECOMMENDATIONS

66 miles from the intersection of Campbell Blue Creek and Highway 666 to confluence with Dry Blue Creek and continuing down Blue River to the San Francisco River as follows:

Downstream from Highway 666 to above the Luce Ranch: Scenic

Above the Luce Ranch on the Campbell Blue to the Smith Place: Recreational

From the Smith Place and the end of the Blue River Road to the XXX Ranch (Now owned by the Forest Service): Wild

XXX Ranch to road crossing of Forest Road #475C: Scenic

Forest Road #475C to the confluence of the San Francisco River: Wild

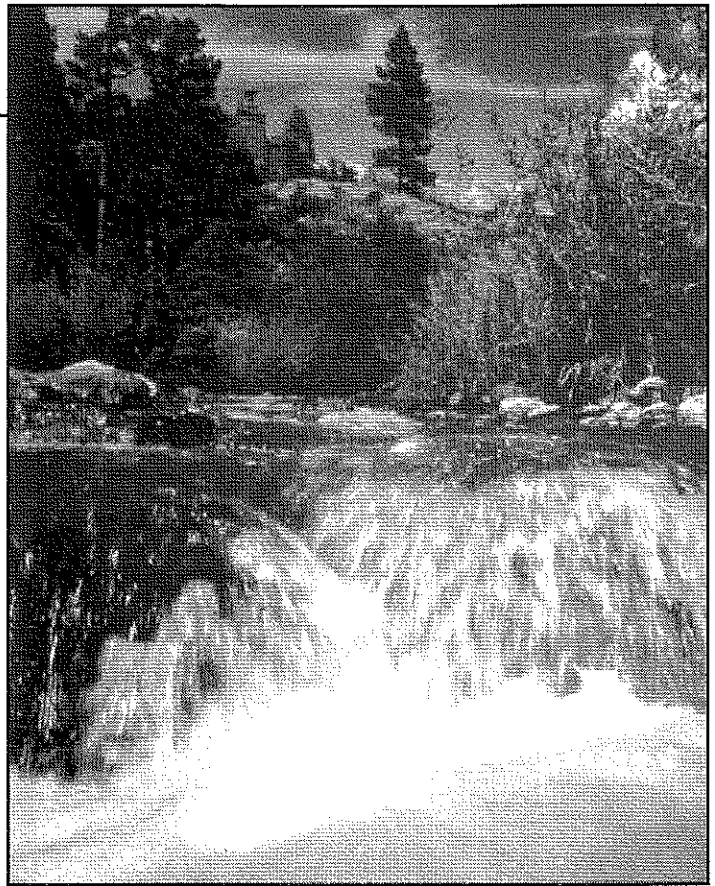
Managing Agency: Apache Sitgreaves National Forest

Private Land: Approximately 10 river miles consisting of scattered ranches and private inholdings.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The Blue is a highly scenic river corridor. There are numerous named rock formations that visually dominate the landscape. Steep walled canyons, box canyons and cliffs are among the geologic features that are continuous along the Blue. Vegetation types range from dense stands of mixed conifer, a high elevation timber type, to a rugged desert chaparral. This constant variety of ecological communities, interspersed by colorful and dominating landforms, provides the eye with a visual feast.

Fish and Wildlife: The Apache-Sitgreaves National Forest Land Management Plan has classified the entire Blue River as an important cold water fishery. The upper reaches feature a naturalized population of brown trout and outstanding potential habitat for the historically native Apache trout which is federally and state listed as a threatened



BLUE RIVER (Photo: Joel Rea)

species. In the future, Arizona Game and Fish hopes to stock only Apache trout along the Blue in order to allow this historic native species to reestablish populations where habitat conditions allow. Recent surveys (1992) by Arizona Game and Fish biologists indicate that loach minnow occupy much of the Blue River drainage. The loach minnow is federally listed as threatened.

The Blue also provides habitat for numerous species that are state or federally listed as endangered, threatened, or sensitive. Raptor species nesting along the Blue include the peregrine falcon, osprey, and northern goshawk. Bald eagles winter along the Blue River. The virgin timber and old growth characteristics provide important habitat for the Mexican spotted owl. The Blue River has been identified by Arizona Game and Fish, the US Fish and Wildlife Service and Preserve Arizona Wolves as potential range for the reintroduction of the Mexican gray wolf which has been extirpated in Arizona.

Other special status species within the Blue River drainage include: Arizona toad, common black hawk, New Mexico jumping mouse, narrow-headed garter snake, Gila groundsel and Mogollon clover. Most of these are associated with the higher elevation reaches of the Blue River drainage.

Game species dependent upon the habitat provided by the Blue include bighorn sheep, black bear, elk, mule deer, whitetail deer, turkey and javelina.

Historic: The Blue River is known for its notable historic sites. A Civil Conservation Corps (CCC) winter field camp was situated in the Johnson canyon area. Much of the work of the CCC still remains visually evident. A rich cultural history has been recorded in "Down

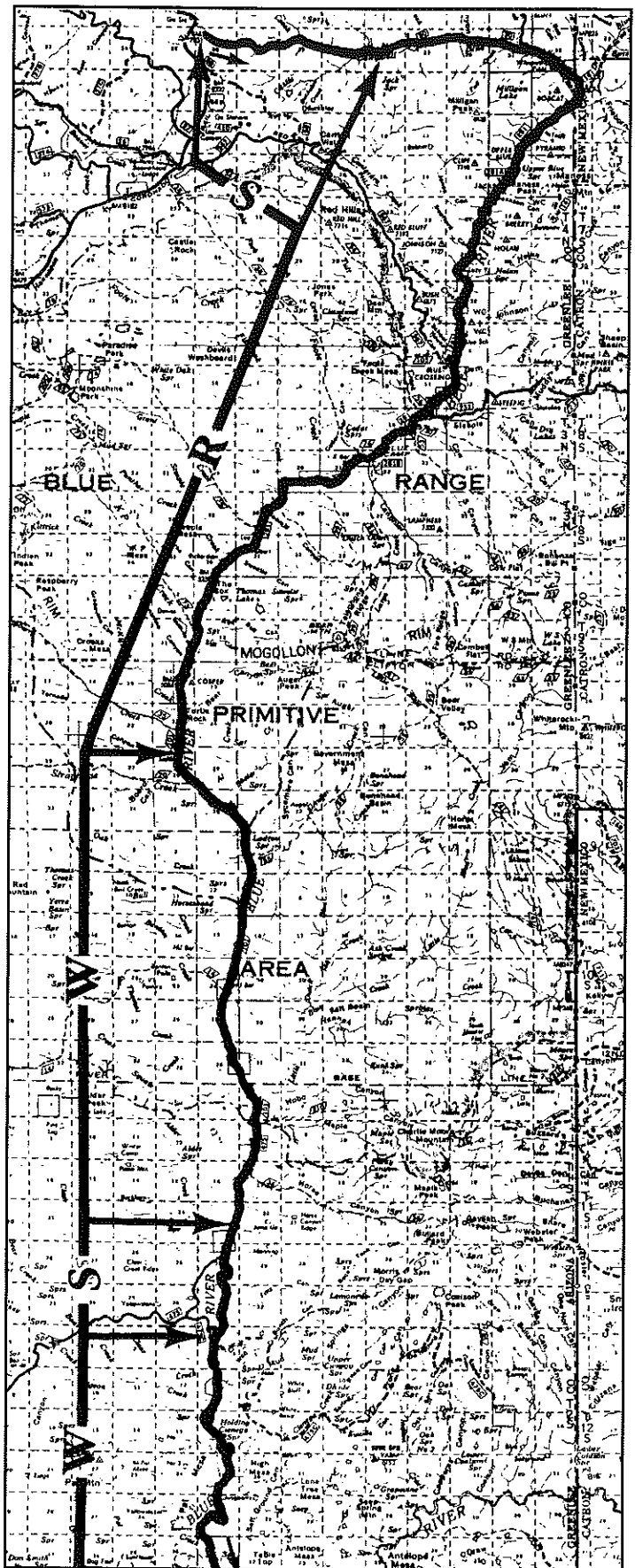
the Blue", a history compiled and edited by the Blue River Cowbelles. A one room school house is still used to educate the students of Blue River. In fact descendants of many of the original settlers still reside along the Blue, and they have retained a remarkably traditional outlook and lifestyle.

Cultural: The cultural resources along the Blue River may be the most remarkable of all the Blue's treasures. Ruins of the prehistoric Mogollon culture abound along the entire proposed Blue River corridor. The structural features evident at the ruins include pithouse villages, small multiple room blocks, small to moderately sized masonry pueblos, ceremonial caves, cliff dwellings, and large multi-storied masonry pueblos with kivas present. Petroglyphs and pictographs can be seen at several locations. It is estimated by the Forest Service that there may be over 400 separate prehistoric sites along the Blue River with many more sites adjacent to the corridor area.

OTHER CONSIDERATIONS

The Forest Service has recommended the Blue Range Primitive Area to be designated as wilderness is currently managed as such. The segment designations carefully drawn in this recommendation will certainly compliment this management direction. The wild segments will be compatible with such designation, while the recreational segments will integrate the rights of the ranchers and home owners who live along the canyon bottom with the wilderness that surrounds them. Any timber industry opposition is not valid as the entire timber resource within the proposed area has been classified as "unavailable" through the Forest Service Land Management Plan. Designation will not affect livestock management within the proposed area. Stocking levels and scheduling of livestock use will continue to be determined through the Allotment Management Planning Process.

Designation of a recreational segment will not affect the existing land use along the Blue, including the present irrigation diversions, but will offer protection and management direction to the upper portion of the stream. The Blue River community has historically reacted strongly against any special federal land classification. However, we feel that there are benefits that recreation and non-consumptive uses can bring to their economy. There is a mystique to the "Blue" that has attracted Indians, cowboys, hunters, hikers, ecologists, writers and artists throughout its history. This pristine canyon and rich heritage begs to be preserved for future generations of all species. The cultural, scenic, and biological values of this very rugged canyon all deserve the protection of the Wild & Scenic River Act.



Map 13 - Blue River

San Francisco River

A major tributary of the Gila River, the San Francisco River flows in a white sand and gravel floodplain through a number of limestone gorges and rock outcroppings. The river channel is meandering and becomes tortuous in lower reaches. The Lower San Francisco Canyon, straddling the Arizona-New Mexico border embraces one of the largest undisturbed tract of remaining lower Sonoran riparian woodland in the United States. Some 32 species of broad-leaved trees and shrubs, dominated by cottonwood, sycamore, willow, and walnut are found in the canyon - an exceptional number for the West! The upper reaches of the river, above 6000 feet, are bordered by sub-alpine meadows and coniferous forests. Plants and wildlife converge on the Gila-San Francisco drainage from such diverse areas as the Sonoran and Chihuahuan deserts; from the Mexican Plateau and the Great Plains; from the Great Basin, the Sierra Madre Occidental, and the Rocky Mountains.

ARC RECOMMENDATIONS

38 miles from San Francisco Hot Springs to the picnic area three miles north of Clifton as follows:

Frisco Hot Springs to Martinez Ranch: Wild

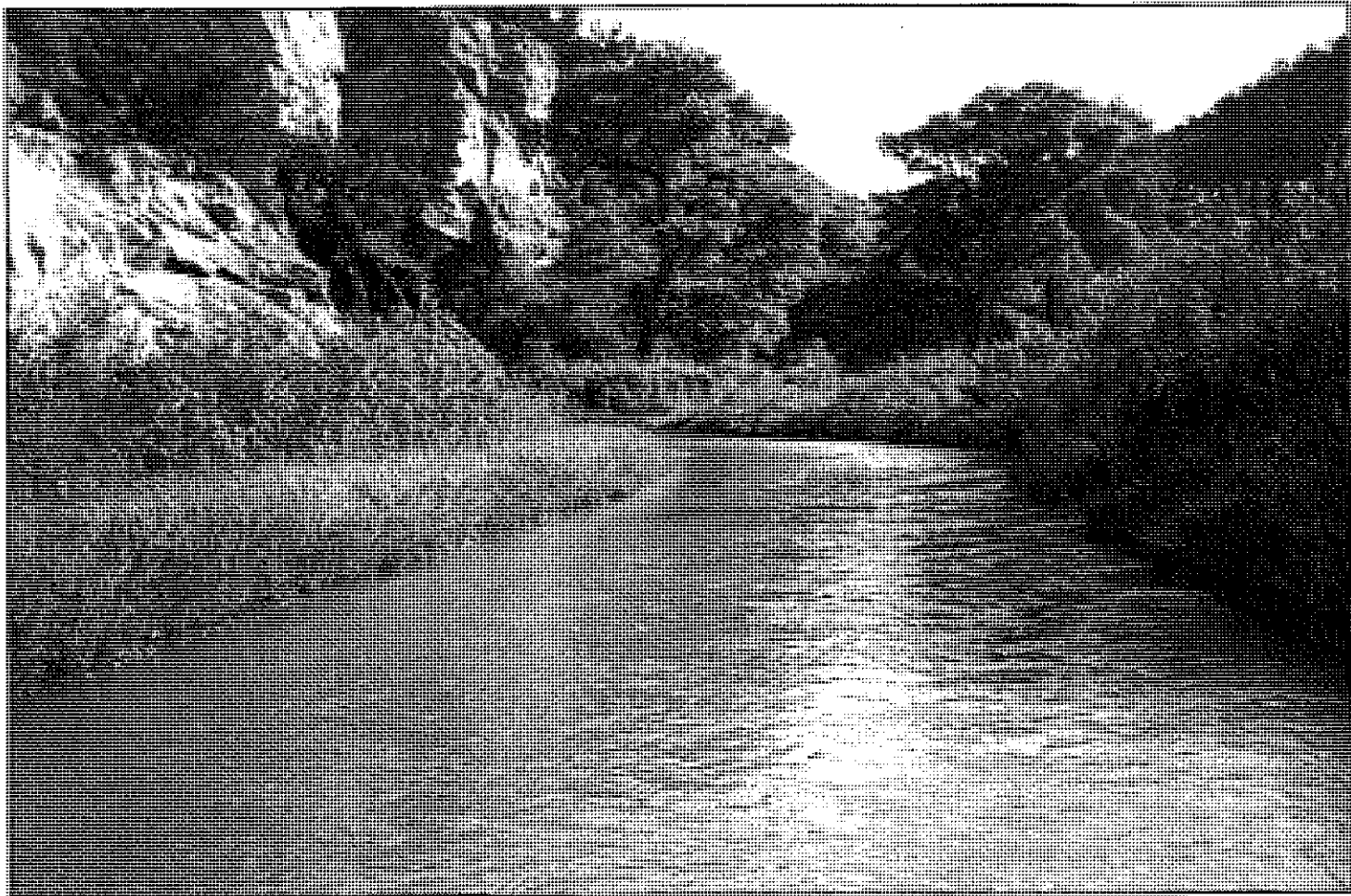
Martinez Ranch to Forest Boundary: Scenic

Forest Boundary to Picnic Area: Recreational

The Coalition recognizes that a significant portion of the San Francisco River courses in New Mexico. We urge New Mexico to join Arizona in asking for a Congressionally authorized study of the San Francisco river from its headwaters, through New Mexico to the Frisco Hot Springs, where we propose immediate designation begin. This write-up reflects our belief that the entire river deserves protection through the Wild and Scenic Rivers Act. Designation: 38 miles; study: 104 miles.

Managing Agency: Apache-Sitgreaves National Forest, Gila National Forest

Private Land: Approximately 30%, mostly in New Mexico



SAN FRANCISCO RIVER (Photo: Tim Flood)

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Prime scenic features are located in upper reaches where the river flows through forested meadows and a highly scenic canyon known as "The Box", and at the lower end of the segment which contains a primitive setting. The Box, a hot spring, and natural bridge have been identified as New Mexico significant natural areas.

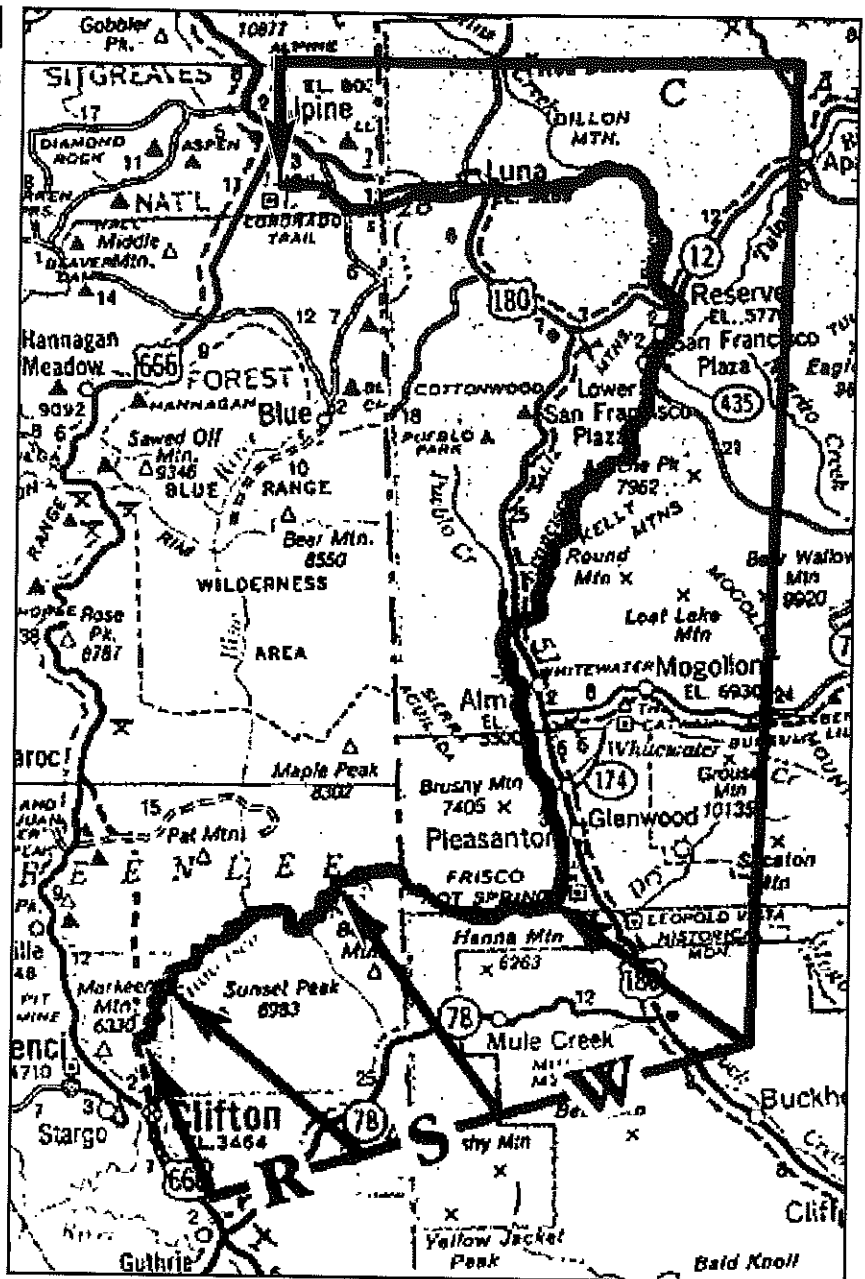
Recreation: Many hot springs occur on the lower reach and are popular recreation destinations. Primitive hiking, fishing, photography, and hunting are other popular activities. Rafting, kayaking, and canoeing are possible with suitable water flows. This use will increase as inflatable kayaks become more popular for low-water use. The river corridor is also suitable to horse-pack trips, although they are negligible at present.

Geologic: "The Box," several hot springs and the natural bridge are the main geological features. The lower San Francisco Canyon was determined by the Apache National Forest, in their Wild & Scenic River Study of 1980, to have outstandingly remarkable scenic values as it courses below towering 1500 foot cliffs.

Fish and Wildlife: Non-native catfish and carp are present, living with native dace, suckers and possibly chubs. The loach minnow, found within the lower San Francisco Canyon, has been federally listed as a threatened species. Other special wildlife include the common black hawk, roundtail chub, and historic records of southwest river otter. Additionally, the river provides suitable habitat for reintroduction of various special status species.

The canyon corridor hosts the largest, most viable herd of bighorn sheep in New Mexico. Mountain lion, bear, wild turkey, whitetail and mule deer also inhabit the river environment. More than 140 species of bird found along the river including the bald eagle, peregrine falcon and common black hawk.

Cultural: Prehistoric remains of past human occupation are evident in canyon walls, cliffs, and caves. Rock art is also evident. As more systematic surveys are conducted it is expected that many more Mogollon and Mimbres sites will be discovered.



Map 14 - San Francisco River

side-canyons, most notably - Mule Creek, should be included in the river corridor designation.

The watershed of the San Francisco River, the White Mountains of Arizona and the Mogollon Mountains of New Mexico, inspired Aldo Leopold to envision our present Federal "Wilderness System" which was first implemented with establishment of the Gila Wilderness in 1924. Almost seventy years later the San Francisco River remains little changed, slicing through some of the most dramatic and diverse wilderness left in the Southwest. Free-flowing for over 150 miles, the San Francisco may quite possibly represent the last best chance to preserve, intact, an entire remnant river of the primeval Southwest. Protective designation of the San Francisco River would be a fitting addition to the Wild and Scenic Rivers System and a tribute to the influential vision of Aldo Leopold.

OTHER CONSIDERATIONS

The proposed stretch of the San Francisco River offers a magnificent opportunity to preserve a lengthy segment of a free-flowing southwestern river. Few, if any, other streams in the southwest offer this unique combination. Major opposition to any designation of the river has been led by various off-road vehicle use groups. However, much of the Lower Canyon, which is the primary area these groups use, has been closed to such use by the Forest Service. That trend will seemingly continue as the general public pursues and insists on protection of riparian areas.

Since neither the Apache or Gila National Forests recommended Wilderness designation for the surrounding wildlands in the respective state wilderness bills, designation of the San Francisco River as a Wild and Scenic River affords the most effective and viable alternative to protecting a unique and valuable resource and its environs. Significant

Eagle Creek and Chitty Creeks

The headwaters of Eagle and Chitty Creeks start high on the southern slopes of the Mogollon Rim. The remote upper reaches of East Eagle Creek and Chitty Creek are accessible by trail and are characterized by a mixture of ponderosa pine and lower woodland species. Further downstream, magnificent cottonwoods and pinyon-juniper woodlands connect the dispersed private lands of the rural and picturesque Upper Eagle Creek community.

ARC RECOMMENDATIONS

Approximately 32 miles from the headwaters in East Eagle Creek and Chitty Creek to where Eagle Creek enters the San Carlos Indian Reservation as follows:

Chitty Creek and East Eagle Creek to the confluence with Dry Prong Creek: Wild

Entire Eagle Creek segment from Dry Prong Creek to boundary of San Carlos Indian Reservation: Recreational

Segments on San Carlos Apache Indian Reservation are not included in this recommendation but we support study of these segments if supported by the tribe.

Managing Agency: Apache Sitgreaves National Forest.

Private Land: Approximately 6 miles or 18%.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The entire watershed offers scenic views of outstanding quality including sereep, rugged canyons near the headwaters, Chitty Falls, spectacular fall colors and riparian vegetation.

Recreation: The Eagle Creek National Recreational Trail follows portions of the East Eagle and Chitty Creek drainages. Numerous other trails access the entire proposed segment. Honeymoon Campground provides a very rural setting for campers and picnickers alike. Numerous swimming holes occur along the perennial stream. Chitty Falls, a 15 foot waterfall adjacent to the National Trail, is a popular destination spot.

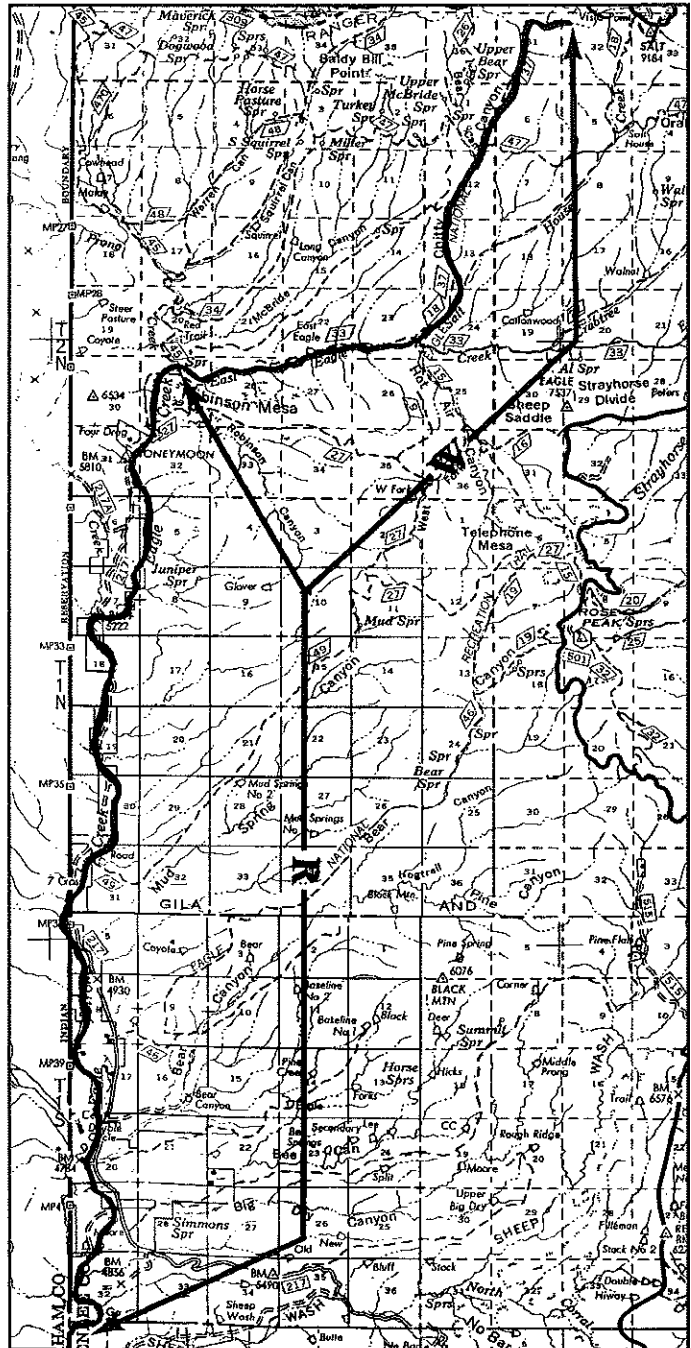
Fish and Wildlife: These creeks have been identified by the Forest as important cold water fisheries. Summer fishing is heavy after stocking of the creek with rainbow trout, which the Arizona Game & Fish Department does every spring. Big game animals include bear, mule deer and elk, with antelope, turkey, javelina, coyote and mountain lion also in the area.

Raptor species that depend on Eagle Creek include Mexican black hawk, northern goshawk, osprey and wintering bald eagles.

Cultural and Historic: Evidence of ruins of the prehistoric Mogollon culture abound along the entire proposed corridor although no comprehensive archeological inventories have been done yet. Sites include pithouse villages, small multiple room blocks, and small masonry pueblos. Historic features include the small school house still in session, remains of the original Honeymoon Ranger Station and the homes and buildings of the early settlers to the area. In fact, several descendants of the original settlers still reside on Eagle Creek.

OTHER CONSIDERATIONS

All timber within the proposed segments has been classified as "unavailable" through the USFS Land Management Plan. Designation would not affect livestock within the proposed area. Phelps Dodge Mining Company uses Eagle Creek as a conduit to transfer water to its Morenci operations, but this is not seen as an adverse effect to the outstandingly remarkable values listed in this proposal. In fact, the activity most likely enhances those values.



Map 15 - Eagle and Chitty Creeks

Pigeon Creek

The Pigeon Creek drainage occurs to the east of the Coronado Scenic Byway. This perennial stream cuts through the rugged Blue Range creating an often steep-walled canyon with impressive waterfalls on its journey to the Blue River. This remote canyon is accessible primarily by trail. Prehistoric Indian ruins are frequent along its route.

ARC RECOMMENDATIONS

Approximately 16 miles of Pigeon Creek from the headwaters to its confluence with Blue River as follows:

Headwaters to confluence with Turkey Creek: Recreational

Turkey Creek to the confluence with Blue River: Wild

Managing Agency: Apache Sitgreaves National Forest

Private Land: Approximately 0.5 miles or 3%.

OUTSTANDINGLY REMARKABLE VALUES

Fish and Wildlife: Native Arizona fish are among the most endangered in the nation. Pigeon Creek is home to speckled dace, longfin dace, desert sucker and Sonora sucker - all native species. Threatened or endangered species dependent at some times upon the creek include

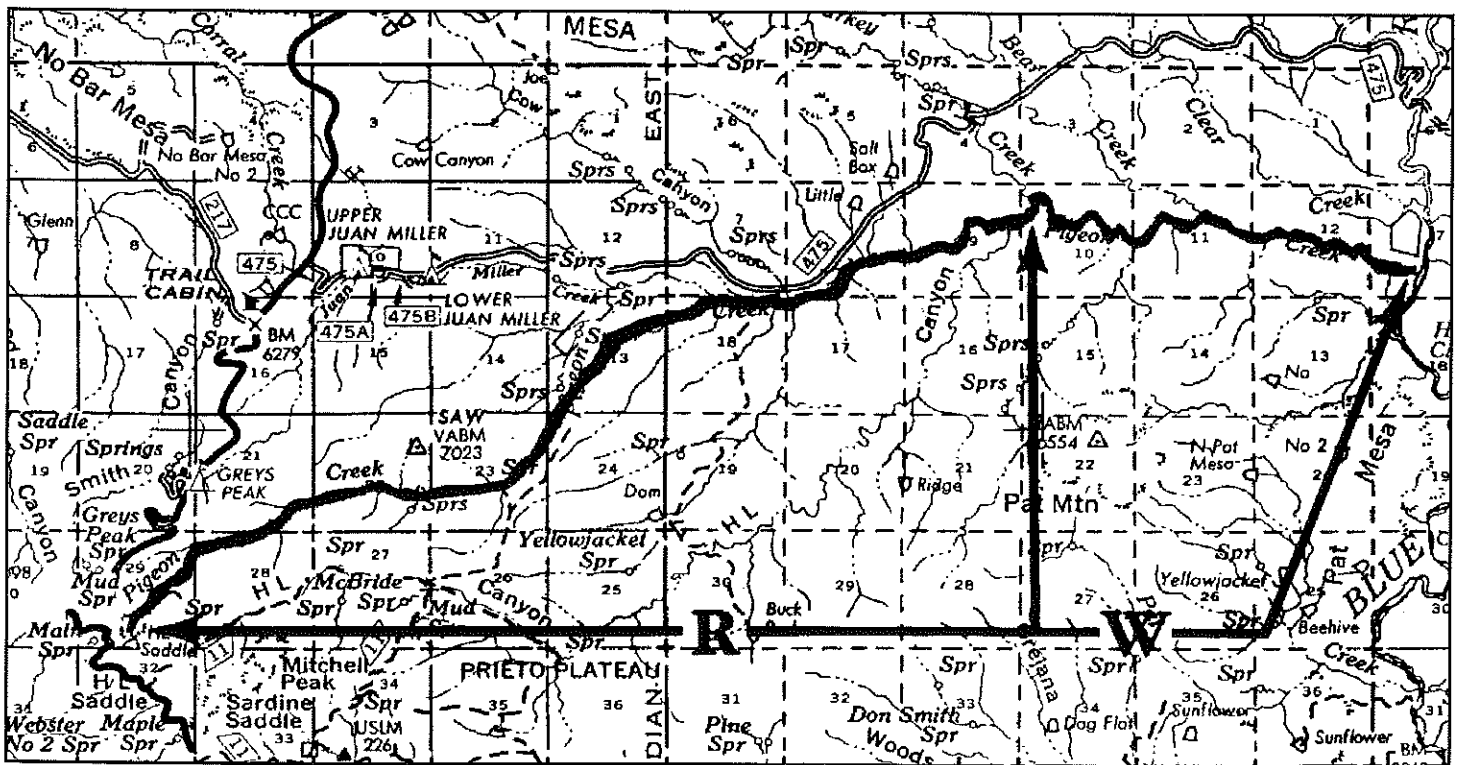
common black hawk, ferruginous hawk, Arizona southwestern road and several varieties of bat.

Cultural and Historic: Sites of the prehistoric Mogollon Culture are found along much of the creek. These sites include a variety of architectural features and artifacts. Most notable are the well known petroglyph/rock art sites that are unique to only a few locations within the Blue Range.

OTHER CONSIDERATIONS

The Forest Service has found both of the proposed segments to be preliminarily eligible for Wild and Scenic River Designation. According to the Apache Sitgreaves National Forest Land Management Plan, there is no suitable or available timber within any portion of Pigeon Creek. Designation would not affect livestock within the proposed area.

Pigeon Creek was not included in the original ARC proposal published in March of 1991. At that time the Forest Service was analyzing a proposal to build a dam and create a recreational fishing lake within Pigeon Creek. This proposal is no longer viable as the FS was not able to transfer water rights for this purpose and because such a proposal conflicted with the standards and guidelines for the Recreation Opportunity Spectrum Classes established in the FS Land Management Plan.



Map 16 - Pigeon Creek

Gila River, (Gila Box Segment)

The Gila (pronounced Hee'-la) River originates in the mountains of New Mexico and enters Arizona near Duncan. As it traverses central Arizona, the Gila links with the Salt River near Phoenix and eventually merges with the Colorado River north of Yuma. The arid nature of this region combined with intensive agricultural diversions of both ground and surface water have combined to reduce the Gila to a dry wash in virtually all of its lower desert segments. The Gila Box segment of the upper Gila river remains in a free-flowing and near natural condition, an exception on a river which has been dramatically altered by the presence of man. The riparian growth found along the river is of significant value. Of the 400 miles of Gila River in Arizona, only the upper 40 miles remain free flowing and unaffected by dams.

The Gila Box segment is located southwest of Clifton, Arizona and includes 26 miles of the upper Gila River, 15 miles of Bonita Creek and 8 miles of the San Francisco River above its confluence with the Gila. This segment has been noted by the Bureau of Land Management (BLM) as being the "last free-flowing stretch of the Gila River in Arizona". Congress has already designated parts of the Gila Box as a National Riparian Conservation Area. The Gila Box segment has been identified as eligible for study as a potential wild, scenic or recreational river in the 1982 National Rivers Inventory conducted by the National Park Service.

ARC RECOMMENDATIONS

26 miles of the Gila River from public land boundary downstream of US 666 to Spring Creek, 15 miles of Bonita Creek and 8 miles of the San Francisco River from public land boundary 2.5 miles south of Clifton to confluence with the Gila River as follows:

Public land boundary below US 666 to west boundary of Section 26 private land: Scenic

Section 26 land to Deadman Canyon: Wild

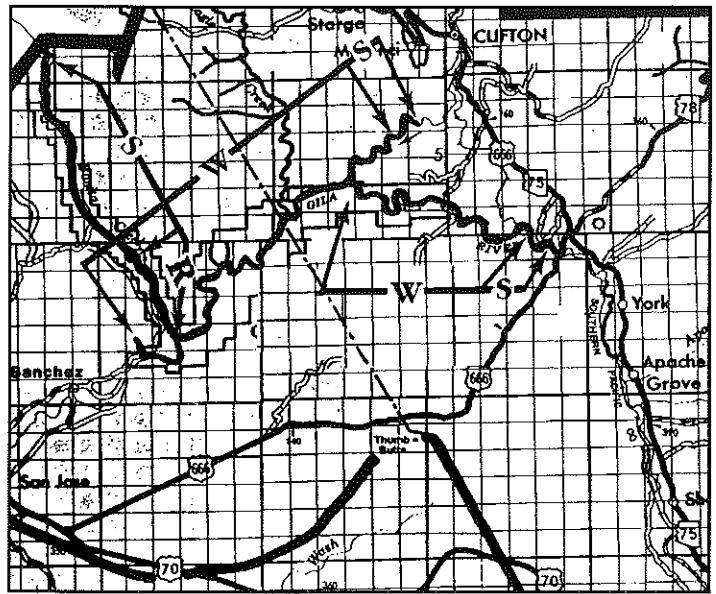
Deadman Canyon to Spring Canyon: Scenic

San Francisco River - 2.5 miles south of Clifton to south boundary of Section 14 private land: Recreational

San Francisco River - Section 14 land to confluence with Gila River: Wild

Bonita Creek - San Carlos Reservation to Lee Trail Road: Scenic

Bonita Creek - Lee Trail Road to confluence with Gila River: Recreational



Map 17 - Gila Box Segment

Managing Agency: Bureau of Land Management, Safford District

Private Land: 3.0 river miles, plus City of Safford.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The Gila Box gets its name from the steep cliffs which rise abruptly downstream from where the Gila River passes under Highway 666. The 1000 foot walls of the canyon possess highly eroded volcanic and conglomerate formations which impart an exceptional beauty to the gorge. The San Francisco River is a tributary which enters into the Gila Box from the north and possesses geologic features similar to that found along the Gila River proper. Bonita Creek runs through a deep canyon joining the Gila River near the end of the proposed segment. Four major vegetation types are found along the river including riparian, mountain shrub, desert shrub, and grassland. The desert surrounding the Gila Box contains an overlap of both Sonoran and Chihuahuan desert vegetation.

Recreation: The natural qualities of the river, its riparian habitat, and its geologic features have made it an area of steadily increasing popularity. The Gila Box is used extensively for rafting and canoeing, hiking, picnicking, and fishing.

Geologic: The walls of the river canyon are cut from volcanic and volcanoclastic rocks. Geothermal activity is present at Gillard Hot Springs located within 0.5 miles of the river.

Fish and Wildlife: The river's riparian vegetation, uncommon in the southwest, creates a rich density and diversity of terrestrial wildlife such as quail, dove, mule deer, javelina, and Rocky Mountain bighorn sheep. This enhanced wildlife habitat combined with the steep 1000 foot walls of the gorge provides shelter for one of the most diverse raptor communities in the Southwest. Peregrine falcons and a wintering population of bald eagles are two federally listed endangered species in

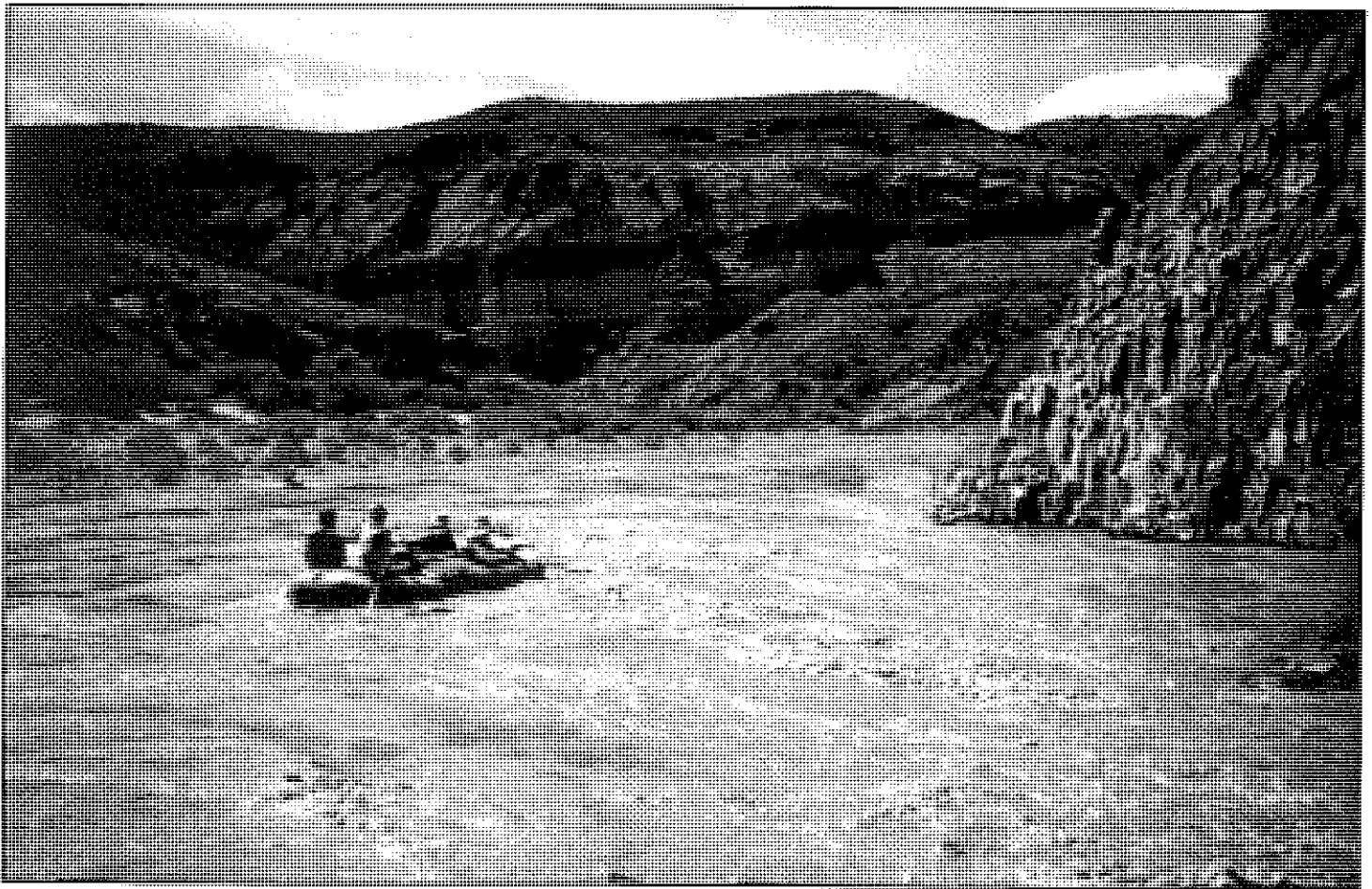
the area. Other state listed endangered species include the black bellied whistling duck, black hawk, osprey, snowy egret, great egret, and black crowned night heron. Endangered species of fish include the federally listed razorback sucker and a number of other native fishes, as well as a diverse assemblage of non-native fishes. The Gila Box is recognized as one of the prime potential recovery areas for a number of native fishes.

OTHER CONSIDERATIONS

This segment has been recognized as the last truly free-flowing reach of the Gila River in Arizona. Extensive low water boating opportunities are present along this segment. Wild & Scenic des-

ignation would enhance management of the area and preclude this remarkable stretch of river from ever being inundated by a reservoir or otherwise developed.

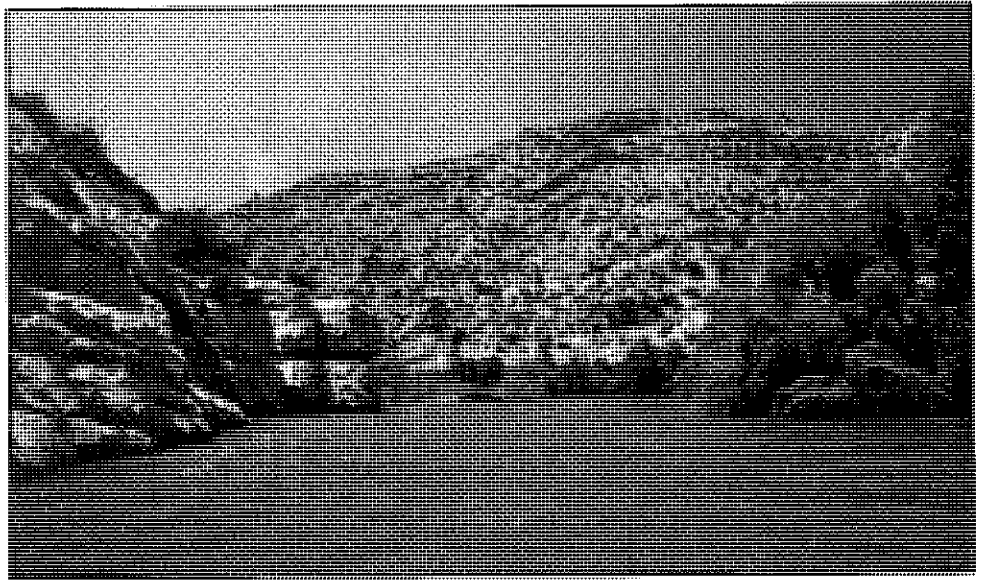
Bonita Creek flows through land owned by the City of Safford, which depends on Bonita Creek for much of the city water supply. Recreational designation of this portion of the creek is compatible with that use of the creek, and management of the entire creek from the Reservation as Wild and Scenic will help ensure the healthy, free-flowing water that the city depends on.



GILA RIVER, GILA BOX SEGMENT (Photo: Jerry Van Gasse)

Gila River, (middle Segment)

The Middle Gila segment is located southeast of Globe, Arizona and stretches from 0.5 miles below the Coolidge Dam and San Carlos Reservoir to Winkleman. The area's rugged topography provides for exceptionally spectacular scenery although limited public access to the upper half of this segment has impeded public recognition of this feature. This segment has been identified as eligible for study as potential wild, scenic, or recreational rivers in the 1982 National Rivers Inventory (NRI) conducted by the National Park Service.



GILA RIVER, MIDDLE SEGMENT (Photo: Tim Flood)

ARC RECOMMENDATIONS

27.5 miles of the Gila River between Coolidge Dam and Winkleman as follows:

Coolidge Dam to south turn of river road: Recreational

South turn of river road to 1.5 miles east of Dripping Springs Wash: Wild

1.5 miles east of Dripping Springs Wash to start of (Section 7) private land north of Winkleman: Recreational

Managing Agencies: Bureau of Land Management and San Carlos Apache Tribe

Private Land: 2.0 river miles. Also, 20 miles of this segment forms a boundary with the San Carlos Apache Indian Reservation.

OUTSTANDINGLY REMARKABLE VALUES

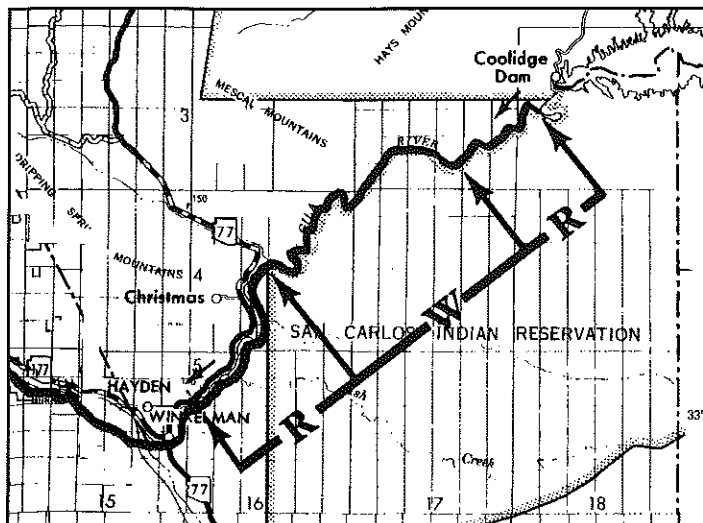
Scenic: From Coolidge Dam, the river cuts through the Mescal Mountains to form a deep and narrow limestone gorge containing several deeply incised passages, including the Needle's Eye. This segment has received the BLM's highest rating of scenic quality when utilizing their Visual Resource Management system. Once emerging from the gorge the river enters another canyon where Highway 77 parallels the river on its winding course through the southern Dripping Spring Mountains toward Winkleman. Dense riparian vegetation grows along the river and its floodplain while Sonoran desert species such as saguaro cactus populate the canyon slopes outside of the floodplain.

Recreation: The upper part of the segment through the Mescal Mountains has been historically difficult to access due to the ruggedness of its canyon combined with the travel restrictions of the Sau

Carlos Indian Reservation. The wilderness recreation potential of the upper segment is evidenced by the rivers utilization as the southern boundary of the Needle's Eye Wilderness Area. Conversely, the lower half of this river segment is paralleled by Arizona Highway 77, is easily accessed by automobile, and receives extensive recreational use in the form of fishing, picnicking, tubing, and rafting.

Geologic: The Middle Gila is representative of large desert rivers that once were much more common in the Southwest. It flows through spectacular canyon and gorge terrain, in many cases as a full-fledged river occupying the entire canyon floor. In the upper gorge, the river flows through the Mescal Mountains along a prominent geologic fault. In the lower gorge, the river cuts through the Dripping Spring Mountains. Both gorges represent a common landform in the Basin and Range Province, whereby rivers flow across mountain ranges rather than away from them. This paradox occurs because the rivers predate the mountains or were lowered onto the mountains by erosion through overlaying sedimentary cover. The geologic materials of the mountains include Mississippian limestones and Proterozoic granites that are more than a billion years old.

Fish and Wildlife: Besides a complement of non-native warm-water fish and waterfowl, the river's riparian habitat hosts numerous uncommon and federally listed species such as the bald eagle, peregrine falcon, snowy egret, black-crowned night heron, osprey, common black hawk, zone-tailed hawk, northern beardless tyrannulet, and the Mississippi kite. In addition, the Gila monster and the desert tortoise may be found here. Other game and non-game wildlife which may frequent the area include quail, dove, mule and white-tailed deer, javelina, desert bighorn sheep, ring-tailed cat, mountain lion, bobcat, gray fox, and coatimundi.



Map 18 - Gila River, middle segment

OTHER CONSIDERATIONS

Forming the southern boundary of the Needle's Eye Wilderness, this segment includes some of the most dramatic, wild, and well preserved scenery in Arizona. The river itself is entrenched in an exceptionally narrow limestone gorge and possesses an unusually dense riparian growth, of significant value on a river that already has lost over 300 miles of such habitat. The river acts as a boundary with the San Carlos Indian Reservation for over 20 miles of this segment. Co-management in conjunction with the San Carlos Apache Tribe is necessary to develop a cohesive plan for both sides of the river and enhance access to the upper reaches of the segment.

Ash Creek, (Pinaleno Mtns.)

Ash Creek runs through terrain dominated by rugged steep slopes and deep canyons. Beginning at an elevation of 9500 feet and flowing down to 3600 feet, Ash Creek passes through a great mix of riparian habitat. Dominated by broadleaf riparian series, the vegetation ranges from coniferous forest types (spruce and firs) to Chihuahuan desert scrub. Many species of wildlife are dependent upon this vegetation for food, nesting areas, and cover. Ash Creek has been noted as a favorite place for black bear in the Pinaleno Mountains, which has one of the highest population of this species in Arizona. Ash Creek is a valuable watershed in one of Arizona's unique "sky islands".

ARC RECOMMEDATION

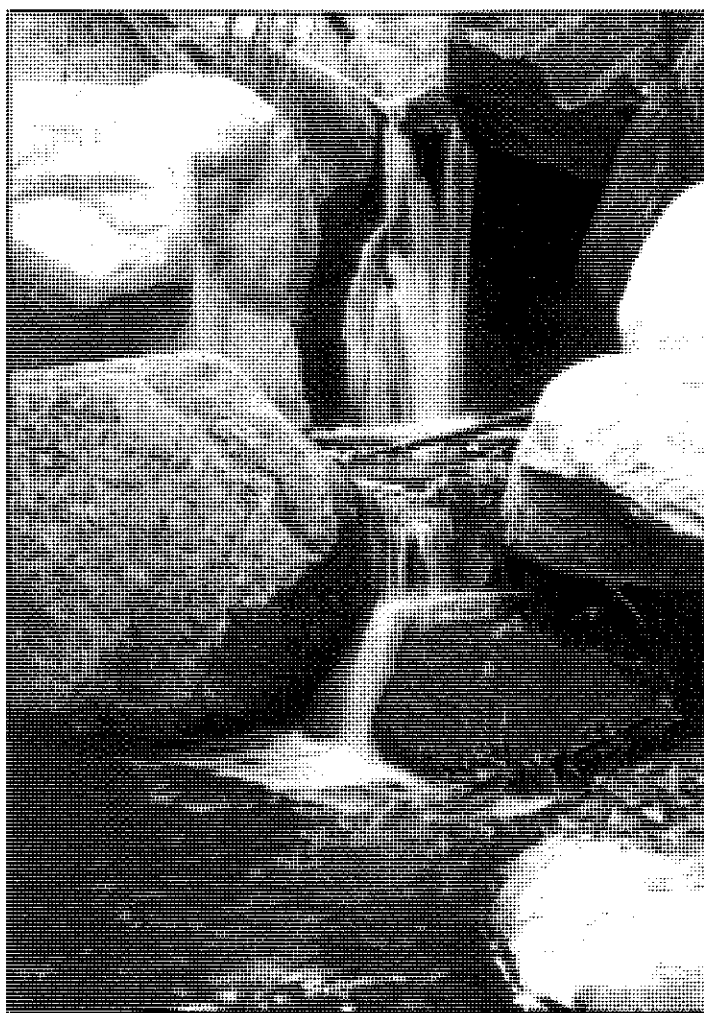
11.7 miles from trail #303 at public corrals to trail #307 at Cluff Reservoir No. 1: Wild

Managing Agencies: Coronado National Forest and Arizona State Land Dept.

Private Land:
None

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Trails along Ash Creek offer spectacular overviews of Dead Man Canyon which include a series of rock outcroppings vegetated by oak and bisected by riparian vegetation at its bottom. The whole of the Safford Valley flatland, northeast of the Pinaleno Mountains to the San Carlos Indian Reservation, can be viewed from several points along the Ash Creek trails. Ash Creek consists of a series of waterfalls, the most spectacular having 200 feet of unimpeded fall.



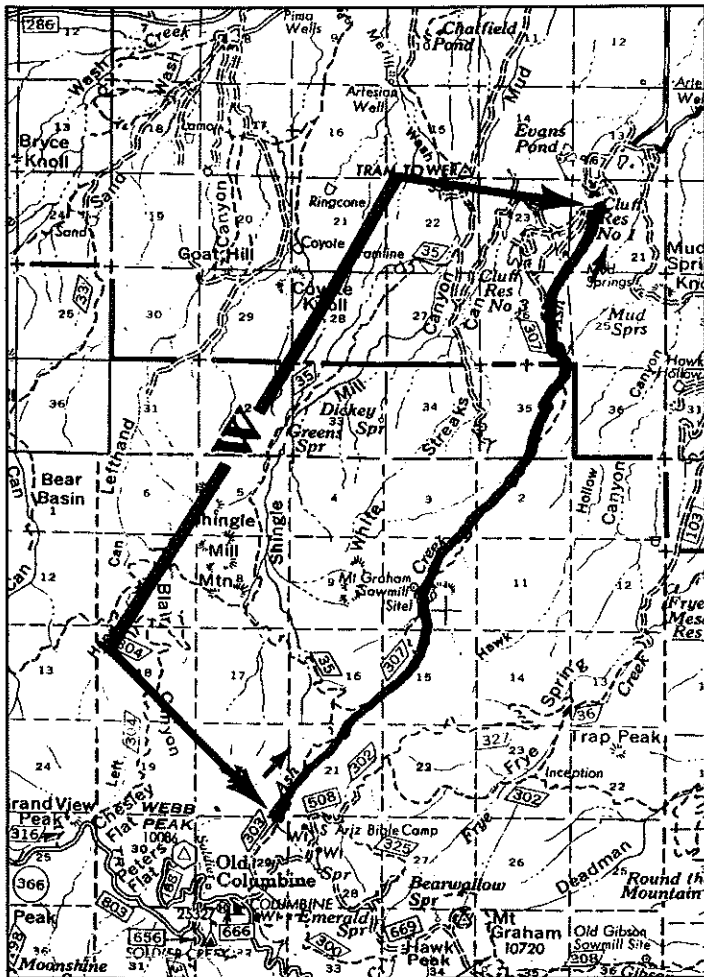
ASH CREEK (Photo: Bill Gobus)

Recreation: Ash Creek has long been valued by sportsmen as a prime hunting area. This is also a popular hiking area where solitude, scenery, wildlife viewing, and swimming in the deep pools are common. The trails that follow Ash Creek are among the most used trails in the Pinaleno Mountains.

Geologic: The geology of the Ash Creek area is characterized by fault-block formations which occurred about 20 million years ago. These formations were formed when blocks moved upward to expose granites, gneiss, and schists of Precambrian Age while basins moved downward to receive the sediments carried by desert and mountain streams from nearby mountain masses.

Fish and Wildlife: Ash Creek contains an introduced population of the federally listed threatened Arizona trout, and the state protected Western twin-spotted rattlesnake. It may also support some individuals of the endangered Mt. Graham red squirrel, as Ash Creek flows through sections of the squirrel's preferred habitat of spruce-fir association.

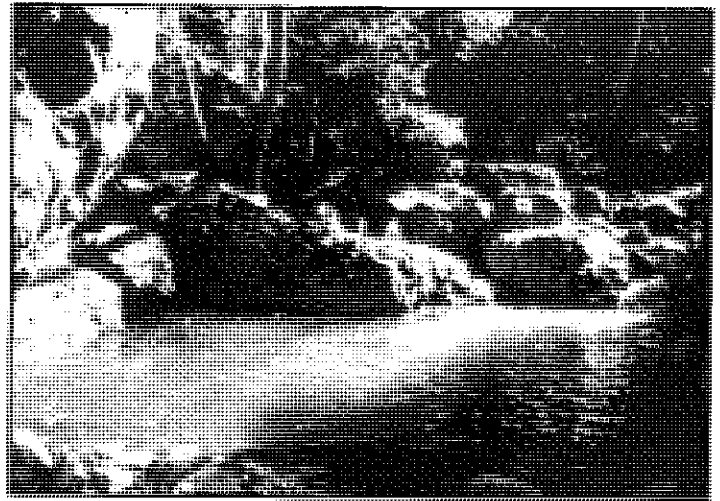
Cultural: Between 1870 and 1920, Ash Creek Canyon was used to move timber to the bottom of the mountain from the timber harvesting operations that were active during this time. Today, metal and wooden sections of the flume can be seen and old mill sites complete with lockers and foundation structures can be found along Ash Creek.



Map 19 - Ash Creek

Cave Creek (middle, north and south forks)

Cave Creek is one of only a few perennial streams that exist in the Chiricahua Mountains. Its upper watershed lies inside the Chiricahua wilderness area, some of the roughest country in southeastern Arizona. It is oasis-like in that it is a home to a wide variety of wildlife, many of which, including over 200 distinct species of birds, migrate to the area yearly. The upper elevations are bordered by forests which include Arizona cypress, Apache pine, Chiricahua pine and Douglas fir. Descending in elevation, vegetation changes to Arizona walnut, madrone, gambel oak, silver-leaf and Emory oak, and Mexican Pinon among other varieties of trees. At the stream bottom there are significant stands of sycamore, cottonwood, bigtooth maple, willow and velvet ash. Cave Creek is free flowing. By late summer and early fall it may be dry in some areas, but there is usually enough surface flow to support some semi-aquatic birds like the water ouzel or dipper.



CAVE CREEK, SOUTH FORK (Photo: Sheila Dean)

ARC RECOMMENDATIONS

Approximately 13 miles of Cave Creek as follows:

About 1.5 miles of Middle Fork: Scenic

About 5.25 miles of North Fork: Wild

About 6 miles of South Fork: Wild

Managing Agency: Coronado National Forest

Private Land: Southwest Research Station, 3 private owners.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Cave Creek is bordered by an array of diverse vegetation from many life zones. These zones are not separated by sharp lines of demarcation since the plants depend upon slope exposure, type of soil, ground moisture and microclimate differences as well as altitude. In any given area, plants typical of Lower Sonoran, Upper Sonoran and Transition zones can be found growing together. Wildflowers representing all the life zones bloom from April to October, when there is adequate rainfall.

Recreation: All forks of Cave Creek offer a variety of recreational activities from bird watching to hiking and camping. The area is renowned for its huge variety of bird life. On the lower stretches of the creek, camping is allowed only at developed sites such as South Fork, Idlewild, Stewart and Sunny Flat. Cave Creek recreation area is located near the junction of the North and South Forks. Hiking pathways are abundant and include South Fork, Burrow, Basin, Greenhouse and Snowshed Trails, all of which cross the creek at some point. There are picnic areas located at John Hands and Herb Martyr.

Winn Falls on the North Fork of Cave Creek is a point of interest.

Geologic: Cave Creek canyon is a slot-like gorge bordered on either side by sheer cliffs with caves, arches and windows. They are formed of latite, a volcanic rock which is colored orange, pink, yellow and salmon. The most striking feature is Cathedral Rock, a massive wedge on the east wall that is 2000 feet high. Crystal Cave is a limestone cavern located about half a mile west of the Southwest Research Station. It was once heavily visited, but was vandalized considerably in the past.

Fish and Wildlife: The Chiricahuas in general and the Cave Creek Watershed in particular are home to a number of state or federal threatened and endangered species including the thick billed parrot, Mexican long-tongued bat, Sanborn long-nosed bat. Candidate species include elegant trogon, Mexican spotted owl, northern goshawk and Apache northern goshawk.

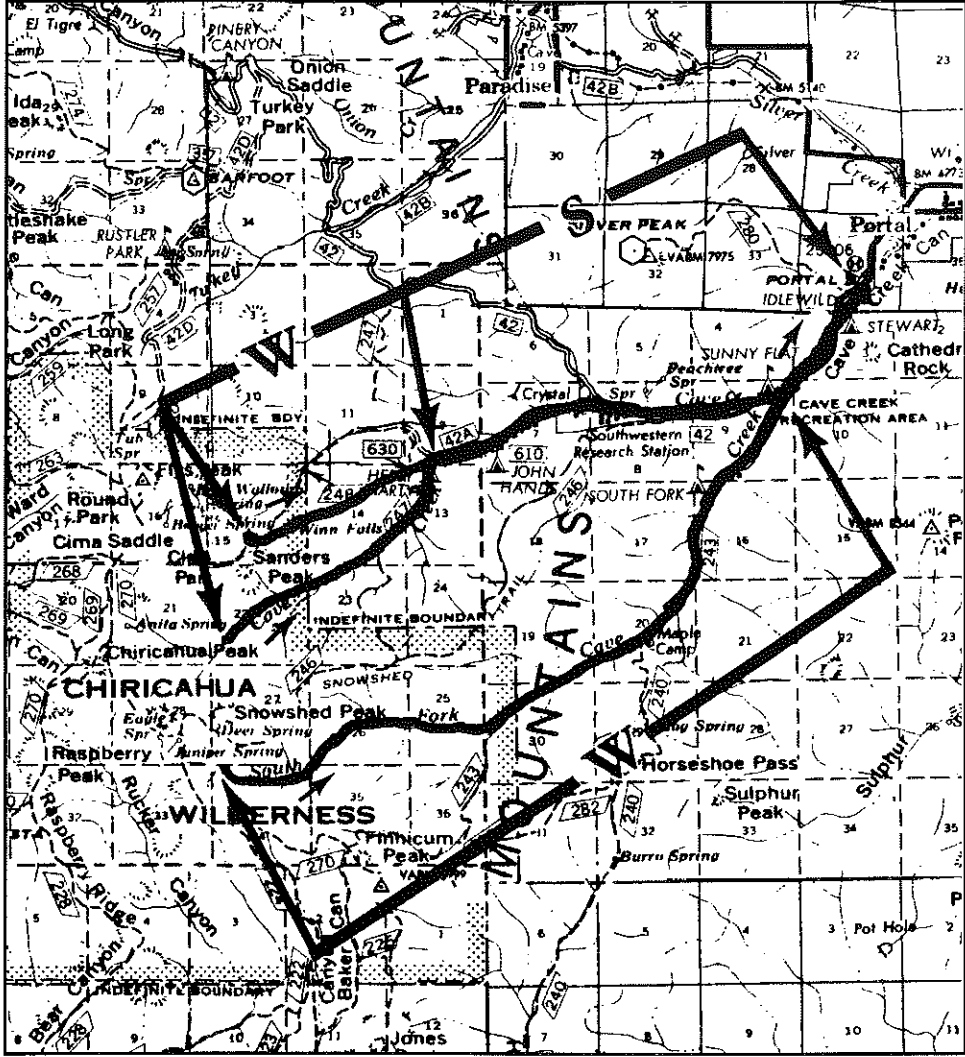
Other significant wildlife include numerous species of hummingbirds, black bear, Coue's white-tailed deer, coatimundi, ring-tailed cat, javelina, mountain lion, coyote, striped skunk, Apache squirrel and wild turkey. This area was also home once to grizzly bear, Mexican grey wolf, and jaguar. The drainage is significant as the northernmost range of many species more common in Mexico.

Cultural: The Chiricahuas were home in the not so distant past to the Chiricahua Apache, whose leaders include both Cochise and Geronimo. Although no formal archeological sites are present along Cave Creek, it was surely the site of much Native American history because of its perennial nature. The Southwest Research Station, once the Painted Canyon Ranch, is now owned by the American Museum of Natural History. It was previously owned by Weldon Heald, a well known author and environmentalist. The research station is home at any given time to biologists studying reptiles, amphibians, birds, insects or any of the other rich variety of wildlife and plant life found in the area. Along Cave Creek there are several small, silted-over dams built by the Civilian Conservation Corps. The Portal Ranger Station was the second designated CCC Camp on the Coronado National Forest and one of the country's longest running.

OTHER CONSIDERATIONS

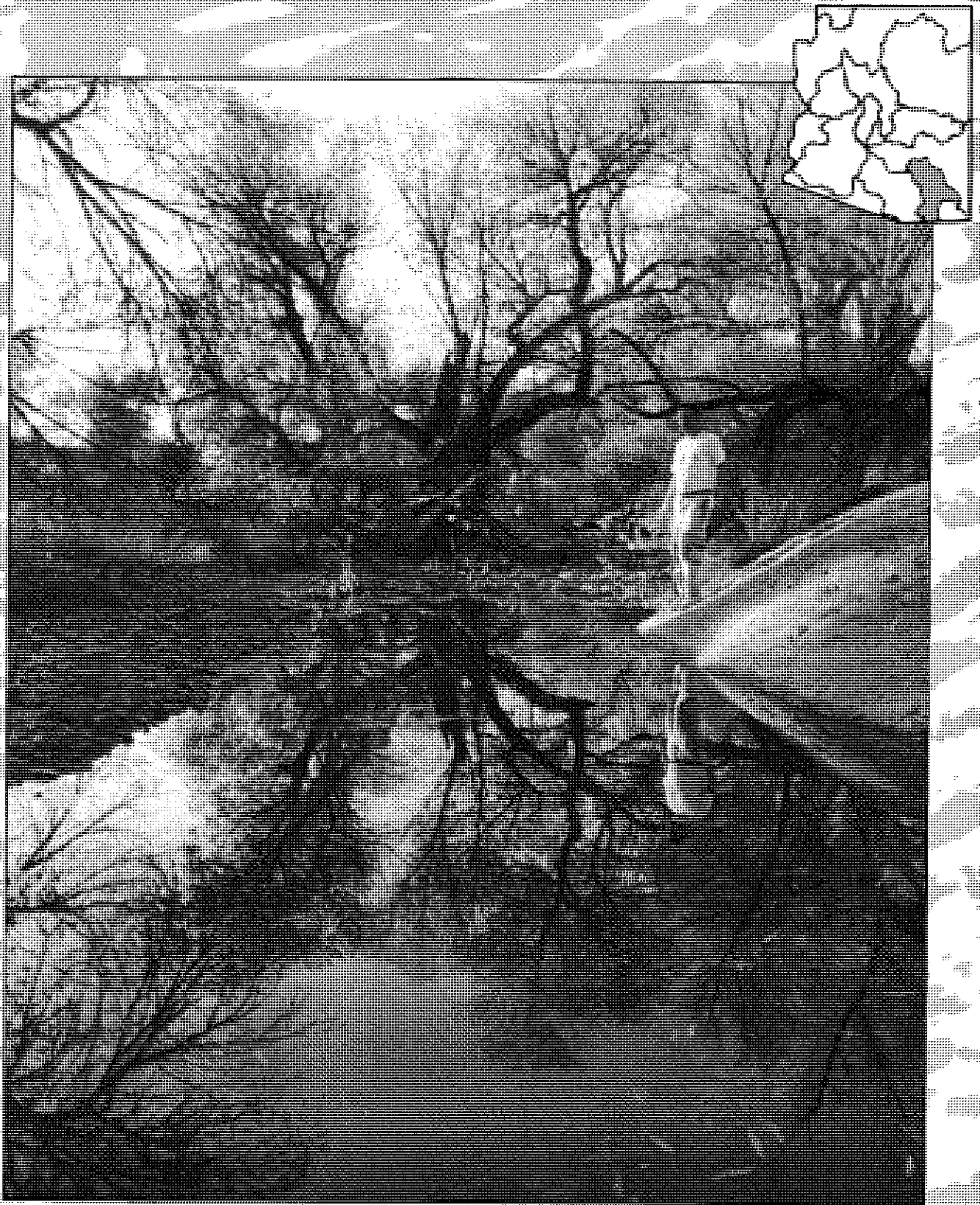
Cave Creek, along both its upper and lower elevations is a critical riparian area in south-eastern Arizona. The enormity of its importance as wildlife habitat in this dry region cannot be overstated.

As a geologically spectacular canyon and an internationally recognized birding spot, Cave Creek fully deserves protection through Wild & Scenic River designation. A threat still posed to the tranquility of Cave Creek is mineral exploration and mining. Mining activities have a proven history of long-term effects on water quality and stream bank stability of waterways within the mined watershed. Wild and Scenic designation would prevent this degradation and allow the area's wildlife to also live undisturbed by any pollution and disturbances due to the additional traffic that mining operations would bring.



Map 20 - Cave Creek

SAN PEDRO RIVER BASIN



Base Contour - For Southern California from Bill Carter

San Pedro River

The San Pedro River is a tributary to the Gila River in southeastern Arizona. It flows northward from Mexico through the Basin and Range physiographic province which is characterized by gently sloping valleys separated by abruptly rising mountains. The section of the San Pedro River proposed flows between the Dragoon and Mule Mountains to the east and the Huachuca and Whetstone Mountains to the west. The river is perennial from the Hereford area to just below the Charleston Hills. The elevation is approximately 3,900 feet. The Upper San Pedro River corridor contains valuable vegetation communities, wildlife populations, paleontological resources, and significant archeological and historical sites.

ARC RECOMMENDATIONS

Approximately 34 miles within the San Pedro Riparian National Conservation Area between Highway 80 and the Mexican border as follows:

Mexican Border to Highway 80: Scenic

Two miles north of Highway 80 to Flowing Well: Scenic

Managing Agency: Bureau of Land Management.

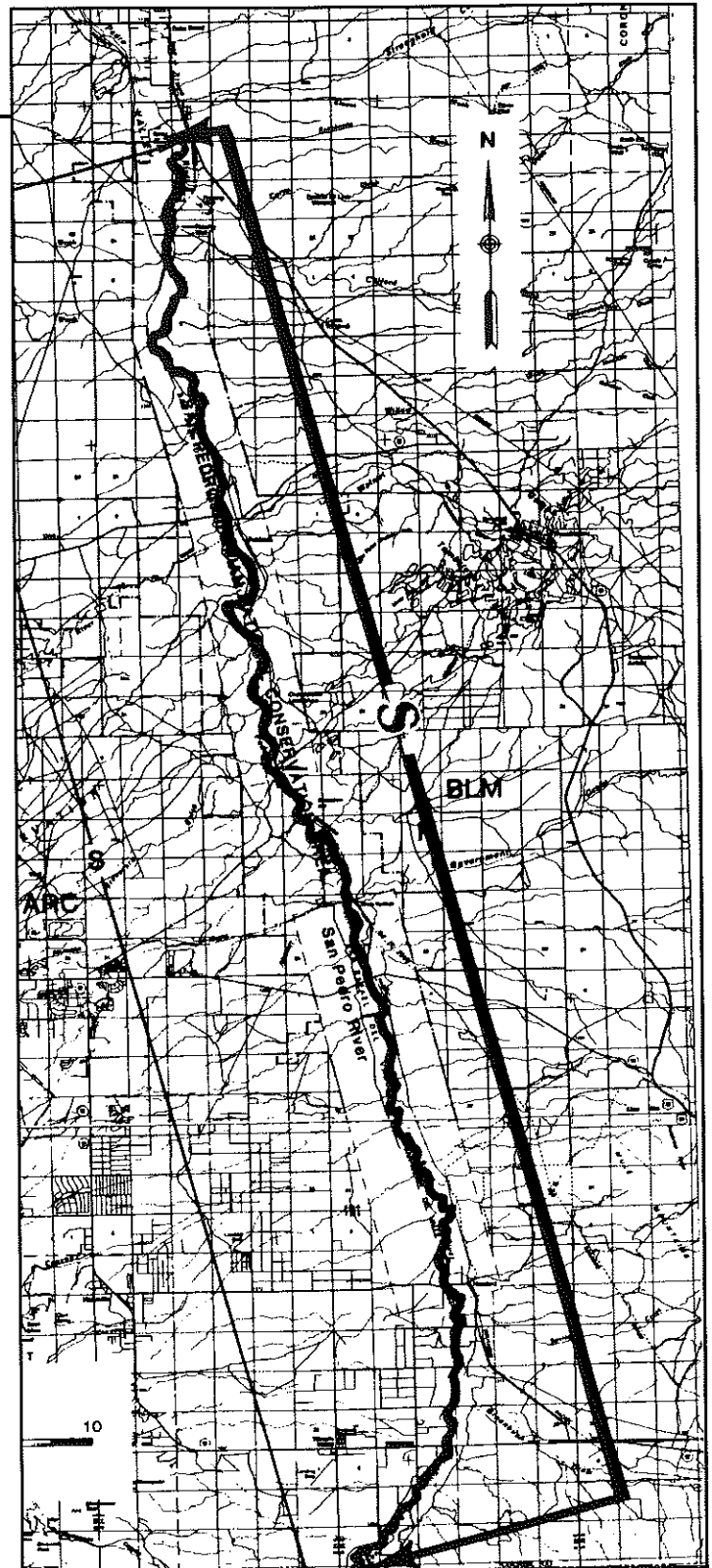
Private Land: Several small areas of private land consisting of farms and houses occur along the proposed segment.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The environment immediately next to the river is a fine example of wooded riparian habitat. Of special note are a number of huge cottonwood trees towering above willows. Bordering the cottonwood-willow area is an extensive mesquite bosque. In addition, a small marsh-like cienega dominated by reeds and sedges is found along the Upper San Pedro. Riparian habitats such as these are increasingly rare in southern Arizona. They offer a dramatic visual contrast to the surrounding chihuahuan desert dominated by creosote, catclaw, tarbush, whitethorn, and mesquite. Riparian areas are also extremely important to wildlife.

Recreation: Nature study, sightseeing, picnicking, camping, hiking, and learning about the historical resources are the most common activities pursued along the San Pedro River. Some of the cultural resources may be protected for public exhibition. The outstanding examples of riparian habitat and 303 species of birds make the upper San Pedro an extremely valuable bird watching location.

Fish and Wildlife: Wildlife in the three riparian plant communities and six upland plant communities along the Upper San Pedro River is abundant and diverse. Over 300 species of birds, 84 mammals, and 41 reptiles and amphibians have been recorded. The federally endan-



Map 21 - San Pedro River

gered bald eagle and peregrine falcon have been observed. In addition, the following species which are being considered for listing as federally threatened or endangered (as of 1989) have been observed along the Upper San Pedro: Swainson's hawk, Mississippi kite, gray hawk, fer-

ruginous hawk, black hawk, caracara, osprey, black-bellied whistling duck, yellow-billed cuckoo, elegant trogon, green kingfisher, thick-billed kingbird, tropical kingbird, black-crowned night heron, snowy egret, northern beardless tyrannulet, Gila monster, lowland leopard frog, Chiricahua leopard frog, Mexican garter snake, and desert kingsnake. Five federally listed threatened and endangered fishes were native to the Upper San Pedro River but have since been extirpated.

Paleontological: With several dozen fossil sites, the land along the Upper San Pedro River ranks among the top two paleontological areas in Arizona. Most of the sites are from the Pleistocene (2 million to 10,000 years ago). In addition, the late Cenozoic terrestrial deposits found here (approximately 1-5 million years ago) rank in the top five in North America. According to the BLM, fossils along the Upper San Pedro River "have a high potential for yielding important information on mammal evolution and intercontinental dispersal...vegetation changes, and climatic changes." Furthermore, this is the "top area in the Western Hemisphere for paleontological sites associated with early man."

Cultural and Historic: Humans inhabited the San Pedro River as long ago as 11,200 years. BLM has identified approximately 150 historical sites and reports that "many of the sites have exceptionally high scientific and/or public values with some values at the international level of importance." The sites are so abundant that some overlap. Some sites are National Historic Landmarks while many others qualify for this designation. Some of the most important cultural resources include:

more known Clovis Hunter sites than anywhere else in the new world; numerous Cochise Culture sites; more Sobaipuri sites than any other area: the only Spanish presidio in the United States under federal management; railroad and mining town sites which could yield extensive information about frontier life. The list goes on. Additional sites are expected to be found with further study.

OTHER CONSIDERATIONS

The area being proposed became a National Conservation Area in November, 1988. However, the Wild & Scenic Rivers Act would provide additional protection for the sensitive ecological, historical, and paleontological resources against new roads, sand and gravel operations, and dams. It might also persuade our government to actively negotiate with Mexico to regulate pollution spills in the river's headwaters. Furthermore, the prestige associated with being a nationally recognized river might benefit scientists applying for research funds.



SAN PEDRO RIVER (Photo: Sheila Dean)

Bass Canyon - Hot Springs Canyon

These two spring-fed streams cut through some of the most scenic landscape in southern Arizona. Bass Canyon begins in the southern portion of the Galiuro Mountains and flows south to join Hot Springs Canyon at the Muleshoe Ranch Preserve. The upper reaches of Bass Canyon flow through a mid-elevation riparian community of alder, sycamore, and ash broadening into a wide canyon bottom with a well developed cottonwood-willow riparian forest. Hot Springs Canyon has several thermal springs feeding in as it cuts a narrow channel through unique and colorful eroded rock formations and eventually flows into the San Pedro River near Cascabel. These isolated streams support a crucial native fishery, with a rare assemblage of species now found in only a few places.

ARC RECOMMENDATION

8+ miles of Bass and Hot Springs Canyon: Wild

Managing Agencies: Cooperative management agreement between The Nature Conservancy, Coronado National Forest, and Bureau of Land Management.

Private Land: 20% of river miles by The Nature Conservancy.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The view from The Nature Conservancy's Muleshoe Ranch Preserve is magnificent with pink and beige eroded hillsides contrasting with the lush green riparian vegetation of Bass Canyon and adjacent streams. Hot Springs Canyon contains little riparian growth, but the scenic rock formations and colors, the narrow rocky canyons, and steep slot side tributaries make this isolated area well worth visiting.

Recreation: The entire area is very isolated and has received little visitation. Most roads require high clearance vehicles to negotiate. Both canyons are just beginning to attract the interest of hikers and nature lovers. Hot Springs Canyon contains several perennial pools that are popular for wading and relaxing. Because of the highly scenic geologic formations, the rare assemblage of fish and diverse wildlife species present, and the pristine location, Bass and Hot Springs Canyons offer a fascinating hiking opportunity.

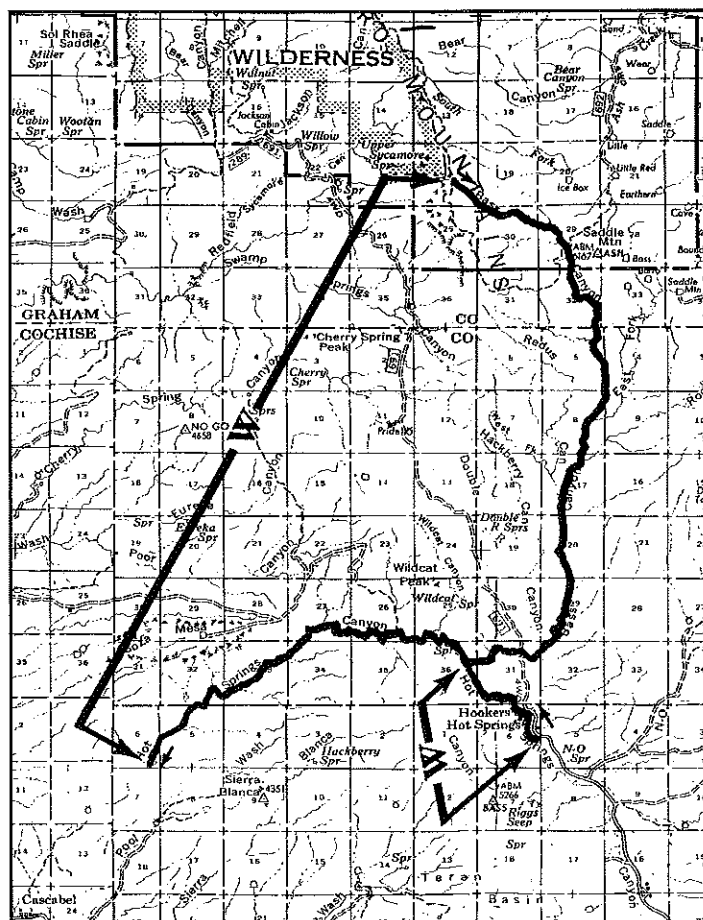
Fish and Wildlife: These perennial streams support five native fish species; the longfin dace, Sonoran sucker, desert sucker, Gila chub and speckled dace, making this area one of the states best undisturbed native fisheries. The excellent riparian forests and perennial streams also support many species of wildlife including some rare species such as zone-tailed hawk and gray hawk. Federally listed species found in the area include the peregrine falcon and Sanborn's long nosed bat. State listed species include the common black hawk and the Gila chub, which was once widespread throughout the Gila watershed and is now present in fewer than 20 sites. There are also healthy populations of javelina, mule deer, coatimundi, desert tortoise, and mountain lion.

Ecological: Bass Canyon and Hot Springs Canyon provide perenni-

ally flowing water along their entire lengths and support lush riparian forests in a very arid, hot environment, enabling many wildlife species to thrive. This undisturbed, remote natural area provides crucial habitat for the regions typical wildlife as well as for many rare and sensitive species. These canyons contribute to the flows in the San Pedro River helping to support downstream riparian communities such as the extensive mesquite bosques in the lower San Pedro watershed. The unusual assemblage of five native fish species is an important part of the Muleshoe's preservation plans. There are no introduced fish species present, making these streams an extraordinary key resource in the preservation of the states native fishery, but invasion of exotic fish species is always a constant threat.

OTHER CONSIDERATIONS

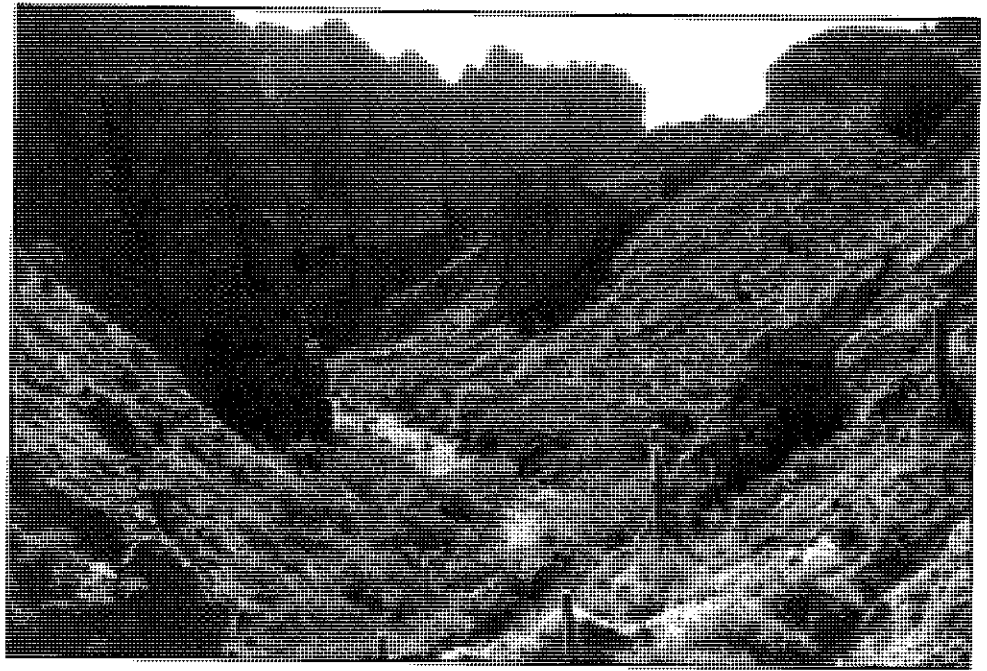
The Muleshoe Ranch Preserve is a unique situation in Arizona. The Nature Conservancy acquired a substantial portion of the ranch and then successfully negotiated a multi-agency cooperative management agreement with the Coronado National Forest, Bureau of Land Management for over 56,000 acres of adjacent land. Wild and Scenic river designation would be an affirmation of the undeveloped and pristine character of these streams.



Map 22 - Bass Canyon - Hot Springs Canyon

Redfield Canyon - Swamp Springs

The deep, rugged walls of Redfield canyon conceal a perennial stream which harbors native fish and an exceptional riparian habitat. It drains much of the wild, remote Galiuro Wilderness Area of the Coronado National Forest. Only primitive, unmaintained roads approach the canyon, helping preserve its seclusion. The highly eroded rock formations, deep secluded pools and lush riparian vegetation are a photographer's paradise. The area's isolation and rich wildlife habitat make it a likely place to observe many species of wildlife.



REDFIELD CANYON (Photo: The Nature Conservancy)

ARC RECOMMENDATION

17 river miles of Redfield Canyon and Swamp Springs: Wild

Managing Agencies: Coronado National Forest, Bureau of Land Management and Arizona State Land Department.

Private Land: 20% of proposed river miles are owned by The Nature Conservancy.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The area is characterized by a network of canyons with spectacular cliffs and rugged divides. The topography varies from the broad, flat bottomland of lower Redfield Canyon to the deeply incised and powerfully challenging Jackson and Sycamore Canyons. Redfield Canyon is a very steep, deep, narrow canyon with a perennially flowing stream and an extensive riparian forest. It is reputed by some to be more impressive than the well known Aravaipa Canyon.

Recreation: Access to this area is extremely rugged and requires a four wheel drive vehicle. The isolation and ruggedness provide an outstanding wilderness experience for hikers and horseback riders. It is considered one of Arizona's most isolated wilderness areas.

Geologic: The highly eroded canyon walls and bottom consist of rhyolite, basalt and ash flow tuffs. The layered volcanic rocks include white ledge-forming tuffs, fractured andesites, and the high cliff-forming red lavas. Distinct land shapes erode from the different volcanic units.

Fish and Wildlife: The perennial stream provides important habitat for four native fish species, including the state listed Gila chub. The excellent riparian forests provide nesting habitat for common black hawk and zone-tailed hawk. Desert tortoise, bighorn sheep and mountain lion frequent the rugged canyons.

Ecological: This important riparian ecosystem with a spring-fed

stream that flows year round is lush in riparian growth dominated by sycamore, cottonwood, ash, and mesquite. Grasslands invaded by agave intergrade in manzanita, oak, and juniper woodlands. The canyon is well known for its great abundance and variety of native birds and large mammals, including mountain lion and black bear. This canyon contains one of the few streams that is free of introduced fish species providing a safe refuge for four native fish species.

Cultural: A number of Native American sites have been identified in the area. There are a number of homestead cabins in the area contributing to the historical importance of the canyon.

OTHER CONSIDERATIONS

This area along with Bass Canyon and Hot Springs Canyon make up the cooperatively managed refuge of over 56,000 acres known as the Muleshoe Ranch Preserve, managed by The Nature Conservancy in conjunction with the Coronado National Forest, Bureau of Land Management, and Arizona State Land Department. All involved parties recognize the unique values of these desert streams and the important niche they fill in the Southwest. The success of this unique cooperative management agreement is testimony to the area's special significance.

The Redfield Canyon/Swamp Springs Canyon complex represents an area which clearly justifies designation as a wild river. Its combination of spectacular scenery, rugged remoteness and exceptional wildlife values associated with its perennial streamflow set this area apart as a truly special place. A wild river designation offers a level of long-term protection, which unlike other designations, focuses specifically on the riparian resource. Non-designation will leave these segments of streams vulnerable to activities that could seriously diminish or destroy those exceptional values outlined above.

Buehman Creek

Buehman Canyon descends off the eastern slopes of the Santa Catalina Mountains northeast of Tucson. The canyon is in the midst of extremely rugged terrain, and its grade is quite steep. It is one of a series of canyons cutting into the eastern end of the Santa Catalinas. At the upper levels of the creek, at approximately 5500 feet elevation, Buehman Creek runs through a forest of juniper, pine and oak. The lower section runs through a mixed broadleaf forest of sycamore, cottonwood, and willow. The entire length of the upper section is perennial and free-flowing; near the lower end, the creek goes underground and emerges intermittently in small perennial pools. The entire length is free-flowing with snow melt in the spring, and again during summer monsoons.

ARC RECOMMENDATIONS

8 miles from above Pinto Spring down to Forest Road #801 as follows:

Six miles from headwaters near Pinto Springs to Forest boundary:

Wild

Two miles from Forest boundary to

Forest Road #801: Recreational

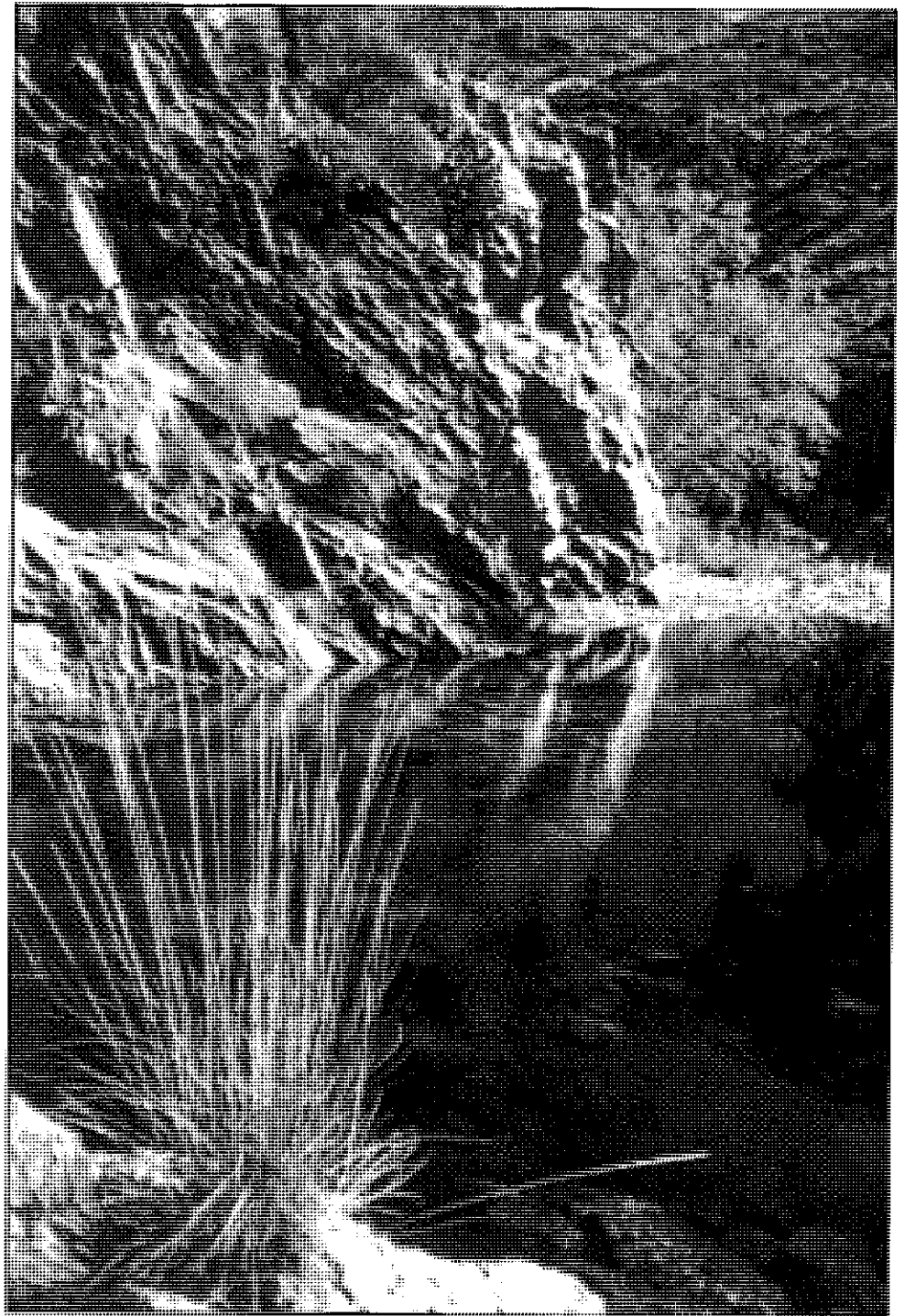
Managing Agency: Coronado National Forest

Private Land: Last 2 miles of proposed segment.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Because the creek descends so rapidly it possesses a high scenic value. Within a five or six mile stretch it moves from a conifer forest into a spectacular stand of saguaro cactus. Due to its inaccessibility, it has wilderness characteristics similar to much more remote areas, while in fact, it is only about 20 miles from Tucson. The steep descent and narrow canyon provide many opportunities for remarkable viewing and photography.

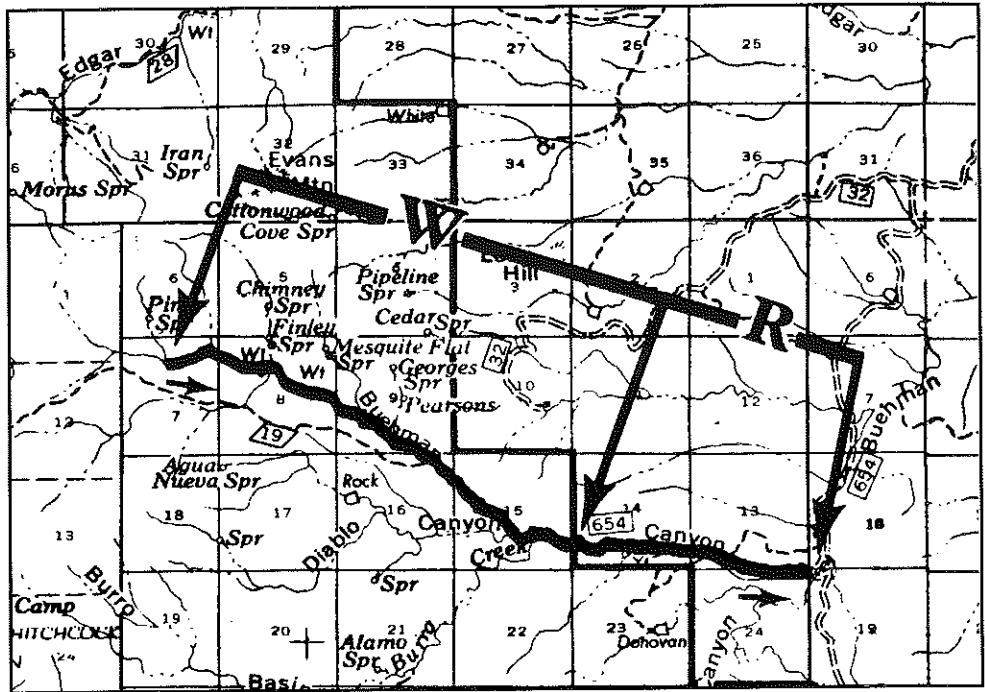
Fish and Wildlife: Buehman Creek is the only perennial stream on the eastern side of the Santa Catalinas and, as such, it is a major wildlife migration corridor joining the higher elevations of the mountains with the San Pedro River Valley. Species in the Buehman Creek area include the lowland leopard frog, desert tortoise, Mexican garter snake, longfin dace, black hawk, gray hawk and owls. It has been clas-



BUEHMAN CREEK (Photo: Bill Gobus)

sified by Arizona Game and Fish as Category 1 habitat, which means it is a most critical riparian habitat and a significant one in the San Pedro River Valley. Gila topminnow and desert pupfish, both endangered species, have been introduced into the creek over recent years.

Geologic: Another noteworthy feature of Buehman Canyon is the limestone formations and caves, rarely found along a Sonoran Desert stream. Limestone typically is found further south and east of the Catalinas. Caves provide essential habitat for bat colonies and it is likely that these caves host maternity colonies of Sanborn's long-nosed bats, a federal and state listed endangered species known to be in the area.



Map 24 - Buehman Creek

OTHER CONSIDERATIONS

One of the interesting aspects of Buehman Creek is its "untouched" character despite being so close to Tucson. This is a consequence of difficult access. One cannot travel the jeep trail leading to the canyon without a four-wheel drive vehicle. Possible mining exploration could put new roads into this area which could lead to exploitation and destruction of a valuable southern Arizona riparian area.

The lower portions of Buehman Creek are threatened by a potential open-pit copper mine with sulfuric acid heap leaching on the slopes above the canyon bottom. Although the mining activities would occur more than 1/4 mile away, it is nevertheless in the same drainage and could destroy this riparian habitat from the dumping of overburden into the canyon bottom and the introduction of toxic chemicals into the ecosystem. It is well documented that creeks down-

stream of mining development are often devoid of aquatic life. The exploratory work alone, completed in 1990, created dozens of road cuts on the steep slopes above Buehman Creek, causing an erosion problem which the Forest Service is now working to correct. Buehman Creek needs wild and scenic river designation because it is a high quality riparian habitat offering exceptional opportunities to observe the variety of life zones unique to the Santa Catalina Mountains and the San Pedro River drainages.

Aravaipa and Turkey Creek

This is one of the most popular destinations for recreationists from Arizona's two largest cities, being only 60 miles from Tucson and 90 miles from Phoenix. Aravaipa Canyon has spectacular scenery with 1000 foot cliffs towering over the gentle stream, lush riparian vegetation and accompanying birds and wildlife.

ARC RECOMMENDATIONS

Turkey Creek from Oak Grove Canyon to Aravaipa: Recreational

Aravaipa Creek through Aravaipa Canyon Wilderness: Wild

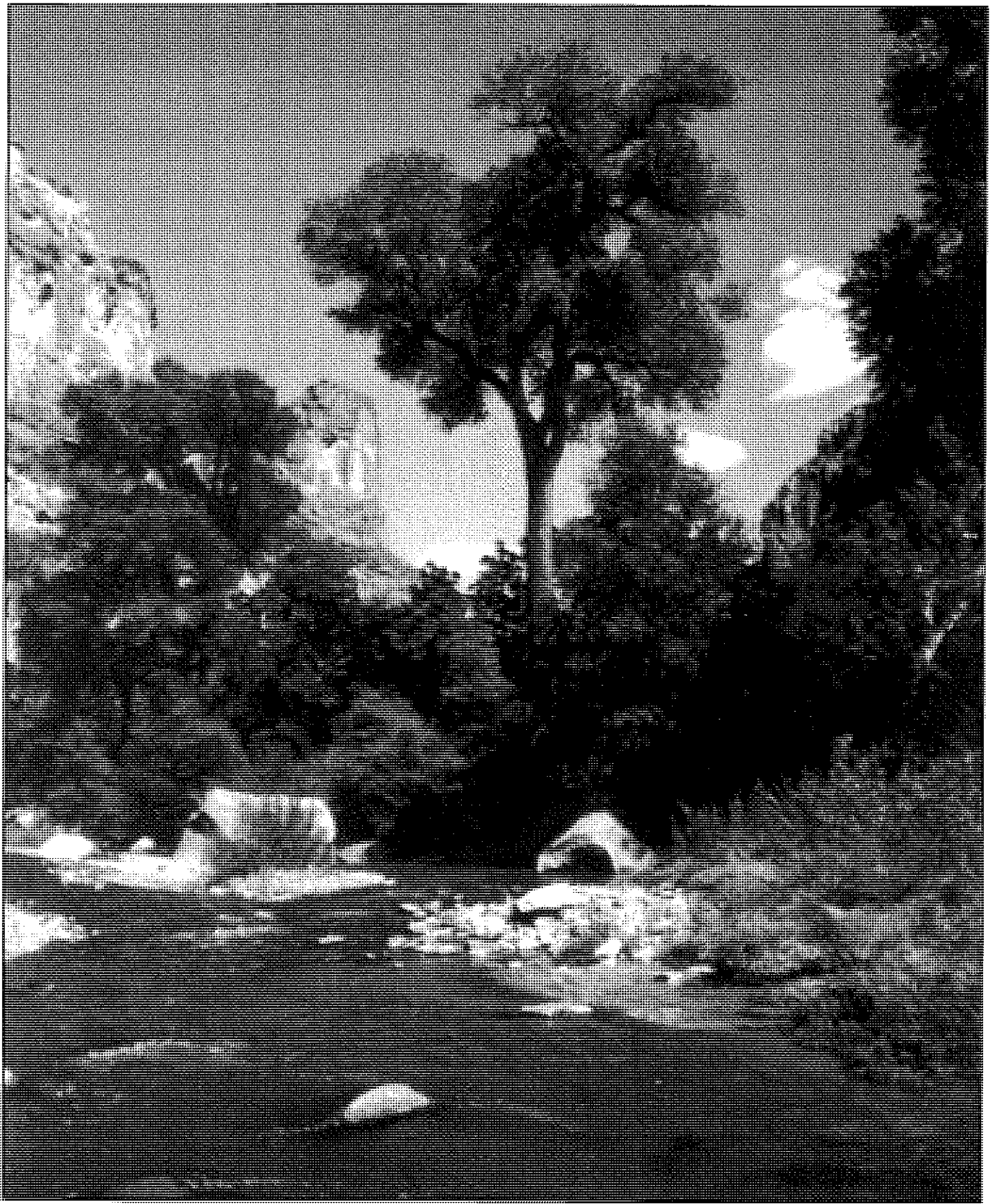
Managing Agency: Bureau of Land Management

Private Land: None

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Turkey Creek flows through a small canyon with large trees and other riparian vegetation before meeting Aravaipa Creek. The scenery in Aravaipa Canyon is what draws so many people to the area. This canyon oasis is surrounded by extremely rugged country, and first time visitors to the area are often surprised by the lush beauty of Aravaipa and Turkey Creeks after the drive in through the scrub desert uplands surrounding the creeks.

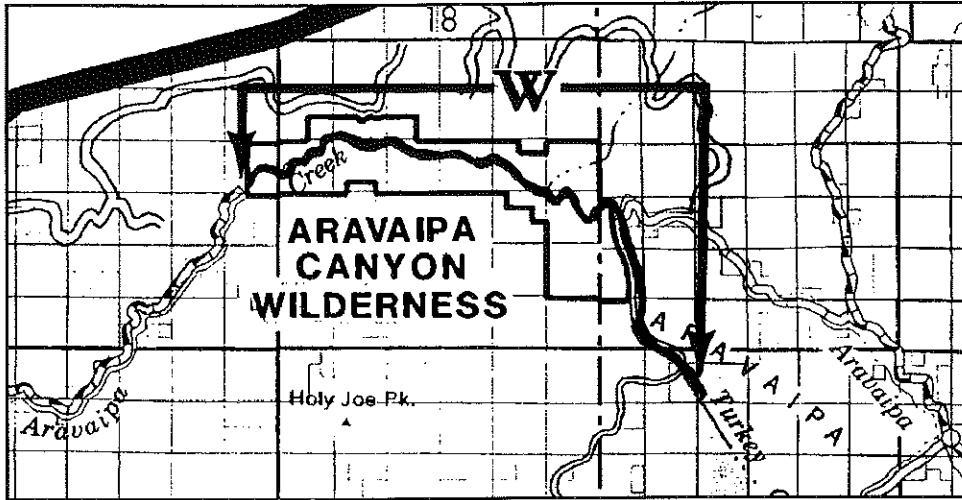
Recreation: So many people want to hike Aravaipa Canyon that a permit system has been established to limit numbers in order to protect the fragile ecosystem. Bird watching is popular, and most people coming to the canyon hope to spot a desert bighorn sheep on the cliffs. Turkey Creek is popular for hunting and day visits as it is accessible by car.



ARAVAIPA CREEK (Photo: Neal Berg)

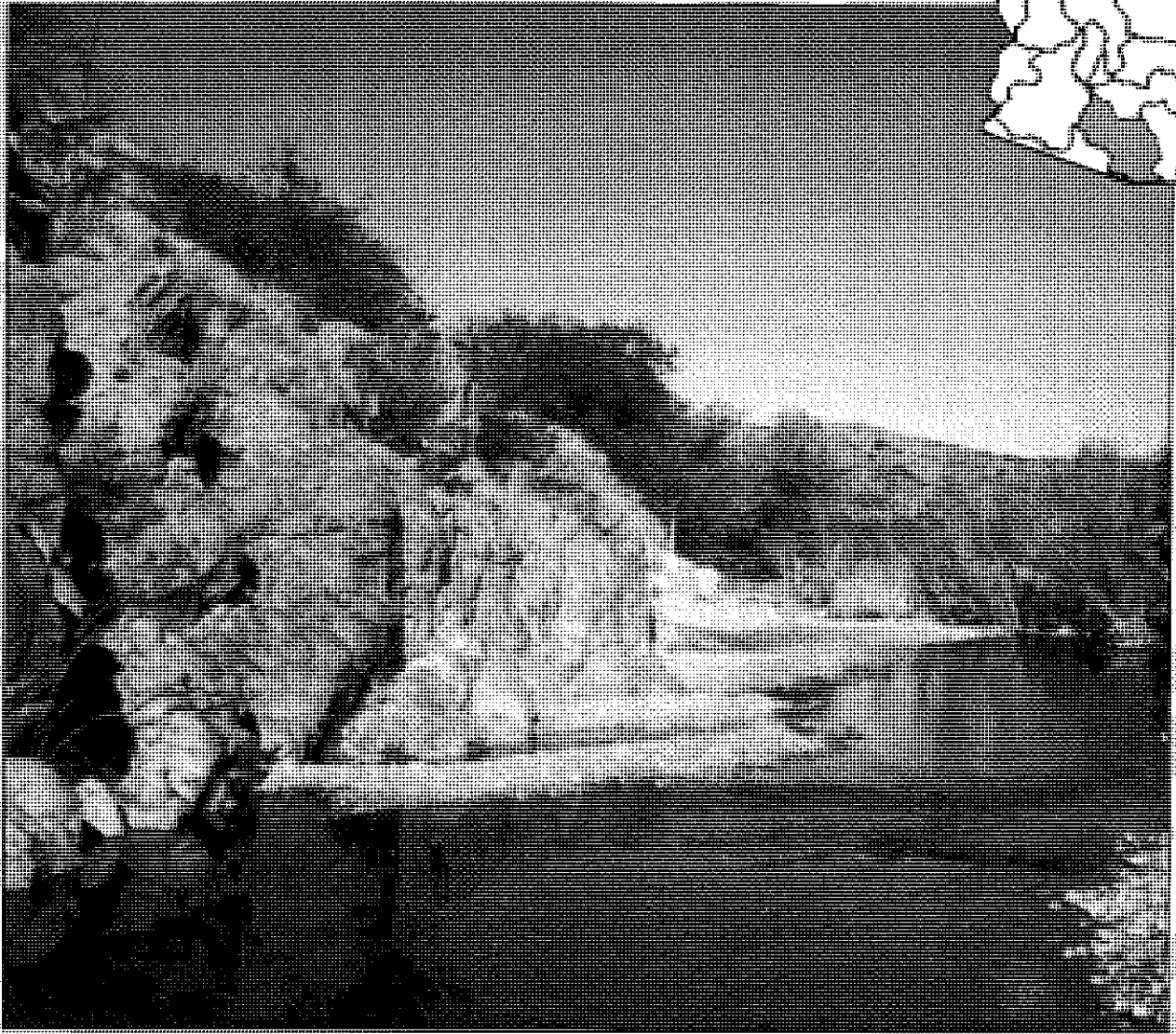
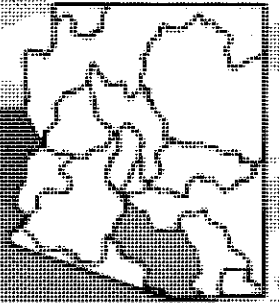
Fish and Wildlife: Aravaipa Creek is home to seven native fishes, the most in any creek in Arizona. Species include loach minnow, spikedace, roundtail chub, longfin dace, Sonoran sucker, speckled dace and desert mountain sucker. The riparian system also supports goshawk, willow flycatcher, peregrine falcon, lowland leopard frog, osprey, western mas-tiff bat and yellow billed cuckoo.

Turkey Creek also supports substantial wildlife with the confluence area and lower reach of Turkey Creek contributing to the habitat of the seven native fishes mentioned above. There is a nesting pair of common black hawk along the creek, a state candidate species. Aravaipa and Turkey Creeks are important areas for wildlife studies and research.



Map 25 - Aravaipa and Turkey Creek

SANTA CRUZ RIVER BASIN



Converse Creek (Photo Courtesy of The Bureau of Land Management)

Cienega Creek

Cienega Creek is a perennial stream starting just north of the town of Sonoita and running northward between the Whetstone and Santa Rita mountain ranges through the BLM's Empire/Cienega Resource Conservation Area. The proposed segment ends at the narrows along the northern border of the BLM land where the creek begins to flow beneath the channel surface. There are two perennial portions, one in the Empire-Cienega RCA, the other in the Pima County Cienega Creek Natural Preserve. In the upper segment, there are three small dam structures and a diversion canal, built about 25 years ago for irrigation but no longer in use.

ARC RECOMMENDATION

10.3 miles from south boundary of Empire-Cienega RCA to narrows:
Scenic

Managing Agency: Bureau of Land Management and Pima County

Private Land: None

OUTSTANDINGLY REMARKABLE VALUES

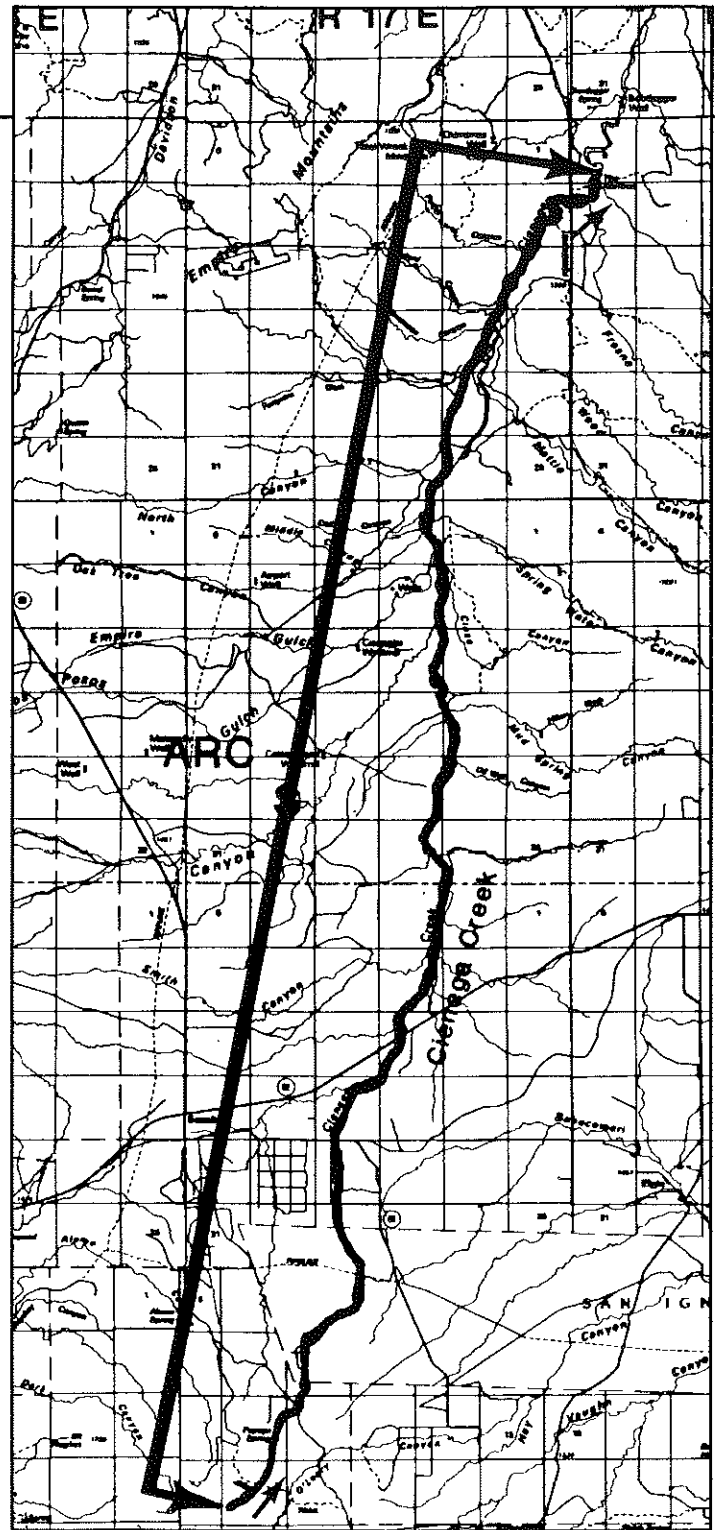
Fish and Wildlife: Cienega Creek is considered one of the finest remaining natural habitats for the Gila topminnow, a federal endangered and state threatened fish species. The creek is home to the largest known population of this native fish species in the United States. Primarily because of its importance to the Gila topminnow, Cienega Creek has received top priority for protection by the Desert Fishes Council, an organization comprising professional wildlife biologists. The Council has rated Cienega Creek as one of five habitats critical to the future survival of the Gila topminnow. Two other native fish species in the creek are the Gila chub and the longfin dace. Cienega Creek is particularly important to the survival of native fishes because it is one of the state's last streams with no exotic fish species.

Other wildlife species of concern in the creek include the Mexican garter snake, lowland leopard frog and Chiricahua leopard frog. Ten special status birds and eight bat species also live near the creek.

Ecological: As its name implies, Cienega Creek is marshy, with cattails and tall grasses rising six feet high. Until the late 1800's, cienega marsh communities were relatively common in southwestern riparian systems; today, most have disappeared. The Cienega Creek wetland community is one of the last and best examples of a relatively intact cienega. The creek also features giant cottonwoods, extensive mesquite thickets, willows, velvet ash, oaks, and junipers.

OTHER CONSIDERATIONS

According to the BLM, archaeological sites in the upper creek area have not been inventoried, although some ancient sites have been dis-



Map 26 - Cienega Creek

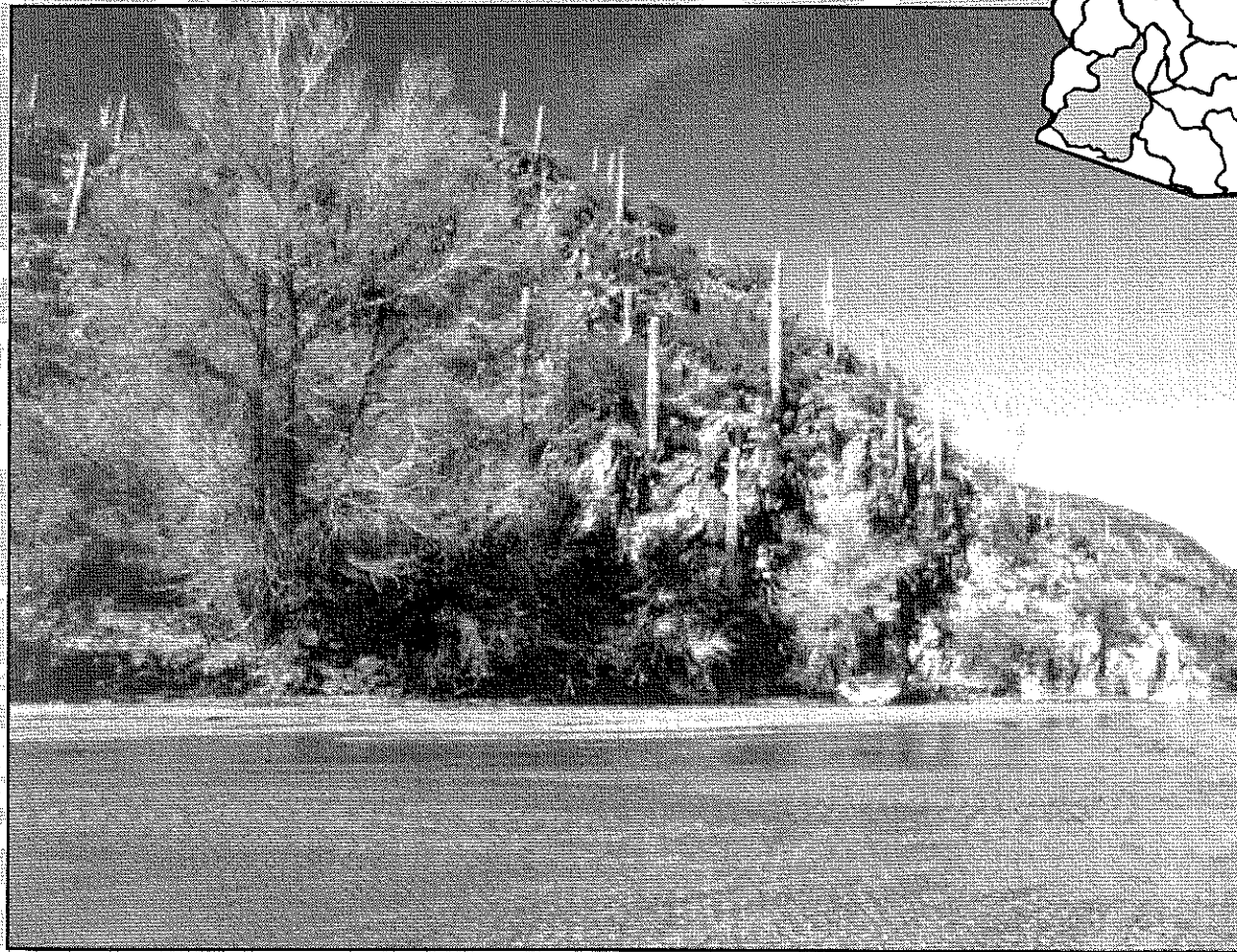
covered in the area. Today, the area is primarily used for hunting, bird watching and hiking. Cienega Creek's importance to native fishes and its marsh-like ecology merit protection for this uncommon creek and riparian area.

The upper part of the creek is intersected by eight unimproved and one graded road, which visitors use to drive across the creek. Downstream, Interstate Highway 10 crosses the creek just upstream of

the Natural Preserve boundary. The only other road of any kind is the paved, two-lane Marsh Station Road. The Marsh Station Road crossing, established in 1921, is extremely scenic due to the dramatic bedrock gorge and presence of flowing water and shade trees nearly 70 feet below the bridge.

Scenic designation would prevent construction of additional roads and further erosion that might compromise water quality. Because the creek is groundwater-fed, its perennial flows are highly vulnerable to degradation from adverse management practices. The state has recognized the pristine water quality of the creek by granting it Unique Water status. Both reduced water quality and reduced surface flows could seriously jeopardize the creek's native fishes, including the endangered Gila topminnow. Scenic designation would encourage monitoring of water quality and require the managing agency to determine sufficient instream flow necessary to sustain native fish populations. Finally, designation would help protect the rare mesquite bosque and cienega ecosystems of upper Cienega Creek and allow Arizona to retain one of its last remaining wetland communities.

LOWER GILA RIVER BASIN



HASSAYAMPA RIVER (Photo: Ken Goldman)

Hassayampa River

The proposed segment starts in the heights of the Bradshaw mountains and flows into the low desert west of Phoenix. A significant feature of the river is its marked change in character as it plunges from the Canadian-like climate at the top of the Bradshaw Mountains to the arid desert floor. In the forest the river is lined with Douglas fir, ponderosa pine, alder willow, aspen and maple. Where the river flows permanently above ground, the vegetation changes to a cottonwood gallery forest. Approximately one mile below the confluence with Cherry Creek, the river enters the Hassayampa River Canyon Wilderness. Pockets of willow trees and occasional Fremont cottonwoods create shade for deep pools that catch three to four foot cascades of water. For the next nine miles the river flows through a deep, relatively pristine landscape, providing a dramatic contrast between the lush ribbon of riparian vegetation and rocky slopes covered with saguaro, palo verde, and ocotillo. This diversity of vegetation, along with the availability of water support numerous special status species of plants and animals.

ARC RECOMMENDATIONS

60 miles from Mount Davis to railroad trestle crossing northwest of Morristown as follows:

28 miles from headwaters at Mt. Davis to northern wilderness boundary: Scenic

8 miles through the Hassayampa Wilderness: Wild

9 miles from Wilderness boundary to the mouth of Hassayampa Box Canyon: Scenic

6 miles from the Box Canyon to the Wickenburg bridge: Recreational

9 miles from Wickenburg bridge to railroad trestle: Scenic

Managing Agencies: Forest Service, Bureau of Land Management, and Arizona State Land Department.

Private Land: Approximately 13 miles.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: This remote area contains a mix of perennial and ephemeral free-flowing waters. The Hassayampa canyon is rugged and sinuous, with a myriad of side canyons. The eastern and southern portions pass through a spectacular gorge nearly 1,000 feet deep. Large boulders, short cascades, and beautiful pools of water occur along the canyon bottom.

Recreation: Recreational opportunities are rated "excellent" and include hiking, backpacking, hunting, horseback riding, mountain climbing, photography, bird watching, and exploring the plant, animal and geological features. There are numerous opportunities for solitude and isolated recreation along the proposed segments.

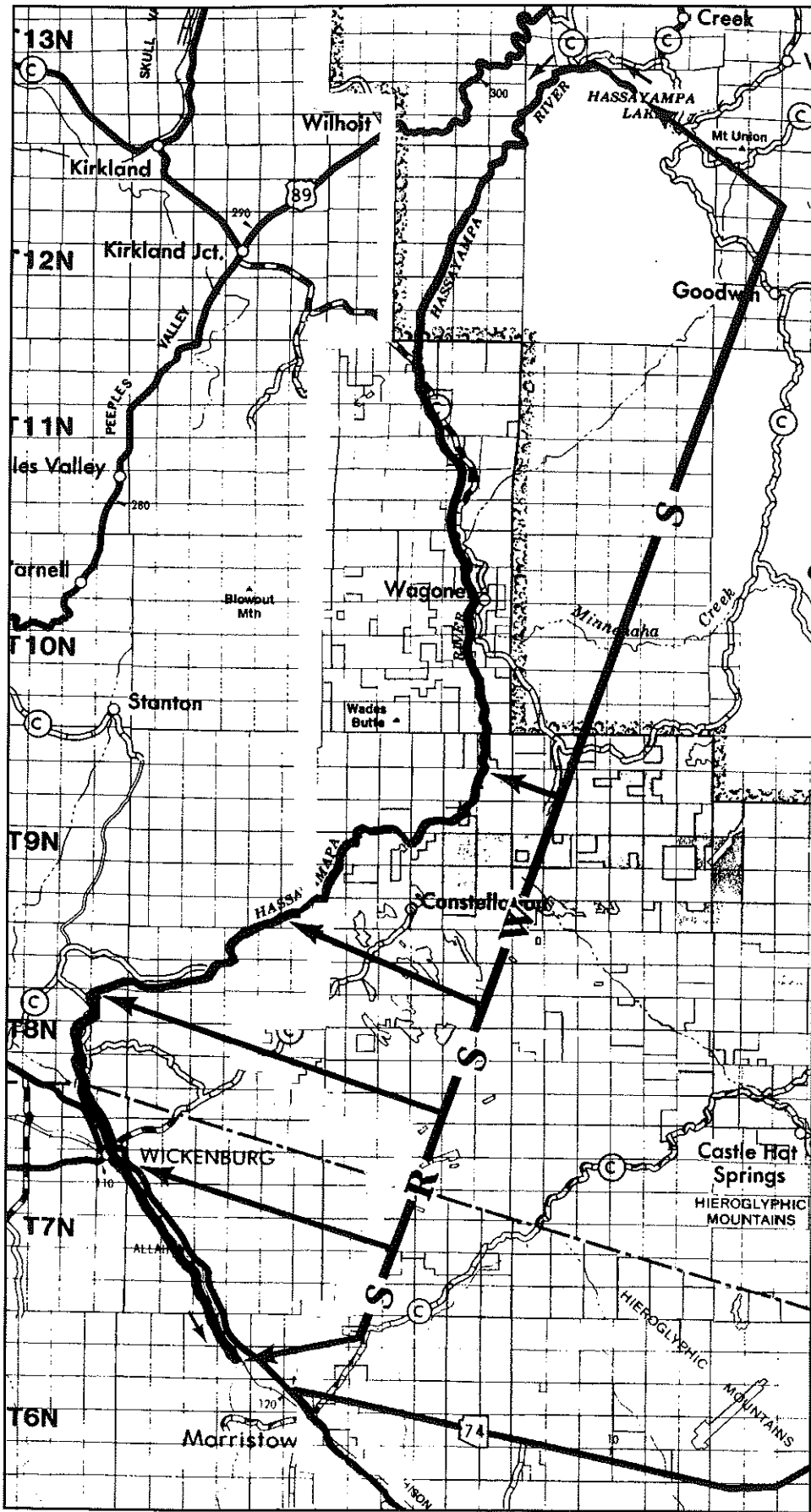
Fish and Wildlife: The corridor abounds with unique species. These include: Gilbert's skink, spotted bat, great egret, snowy egret, black crowned night heron, zone tailed hawk, black hawk, Gila monster, golden eagle, and prairie falcon. There are two unusual plants: the flannelbush, which is being proposed by BLM as a sensitive species, and a small group of Arizona cypress which occurs in the northern part. State listed species include: Arizona skink (the only known population). Also present are the Harris hawk, yellow-billed cuckoo, willow flycatcher, Bell's vireo, summer tanager, yellow warbler, belted kingfisher, vermilion flycatcher, yellow-breasted chat, common yellow throat, southwestern toad, lowland leopard frog, longfun dace, and desert tortoise.

Ecological: The riparian vegetation and perennial water that occurs in the Hassayampa River are host to 10 special-status species. This is the seventh most numerous number of special status species identified out of 17 areas studied in the Upper Sonoran Wilderness Inventory. However, careful and detailed studies of the wildlife have not been performed and it is likely that there are other species in the area. This area is situated in an ecologically strategic location in the west-central portion of the state.

OTHER CONSIDERATIONS

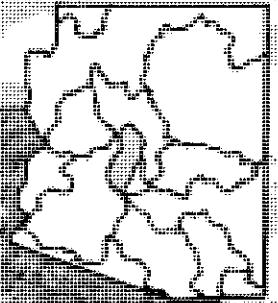
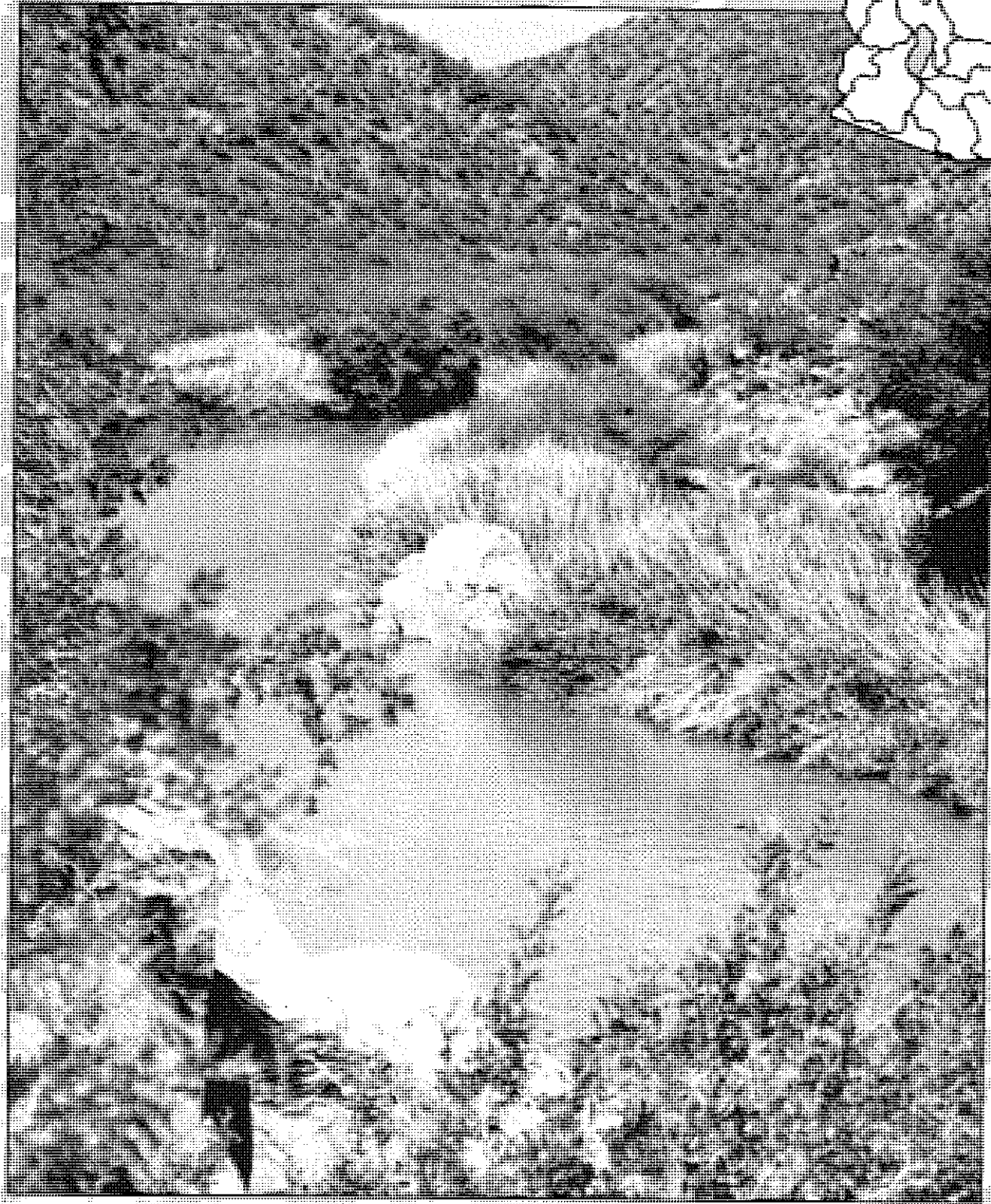
The river is threatened by placer gold exploration, and indiscriminate off-road vehicle use that has resulted in visible damage to the riparian vegetation. Wild and Scenic River designation would ensure that any mining activity would be performed in a manner that would protect the other natural values of the canyon. Also threatening the river is a proposed dam that would be located in the Box. This dam has met opposition from horse riders and visitors to the Hassayampa Nature Preserve located south of Wickenburg. Off-road vehicle use is causing degradation of the riparian segments outside the newly designated wilderness area.

In addition to its ecological importance to the west-central part of the state, a free-flowing Hassayampa River is important to the economy of Wickenburg. This town has seen a noticeable increase in tourists from around the country who come to experience the natural riparian values found at the Nature Conservancy's preserve, south of town. Preservation of the upstream proposed segments will help ensure the status of the downstream segments. Designation will encourage consistent management of a river that is threatened with indiscriminate off-road vehicle use, mining and a dam. This river is capable of delivering much delight to all of Arizona's citizens.



Map 27 - Hassayampa River

AGUA FRÍA RIVER BASIN



AGUA FRÍA RIVER (Photo: Carl Pennel)

Agua Fría River

The Agua Fria (Spanish for "chilly water") is a major tributary of the middle Gila River. Originating east of Prescott, the Agua Fria flows generally south toward Phoenix, a total distance of approximately 100 miles. Downstream the river is impounded to form Lake Pleasant, which has undergone a \$450+ million expansion for the massive New Waddell Dam, 444 feet high, to store Central Arizona Project water. Below the dam all of the water from the Agua Fria is diverted into irrigation canals. Finally, the de-watered riverbed below the dam winds through west Phoenix and joins the Gila River just downstream of the Salt-Gila confluence. Proposed for Wild and Scenic River designation is an 18 mile long, middle segment of the Agua Fria River. This segment lies in a predominately volcanic formation of the Sonoran desert.

ARC RECOMMENDATIONS

18 miles from Sycamore Creek to the end of Black Mesa below Larry Creek:

6 miles from Sycamore Creek to Horseshoe Ranch: Scenic

12 miles from Horseshoe Ranch to Larry Creek: Wild

Managing Agency: Bureau of Land Management

Private Land: About 4 miles

OUTSTANDINGLY REMARKABLE VALUES

Recreation: Recreational opportunities along the proposed segment include hiking, camping, backpacking, cross country trekking, rock climbing, bird watching, family picnicking, and just enjoying the soothing, awesome quiet of the isolated river canyon. Small pools with their myriad of life can occupy a child's curiosity for hours. Other activities include hunting in fall and winter and dipping oneself in cool pools during the summer. The river is a rather unknown getaway because the surrounding steep, rough, volcanic terrain protects much of the river from off-road vehicle use.

Ecological: In many places, the riparian qualities along the Agua Fria are first rate, such as the dense cottonwood bosque from near Arcosanti down to the area below the confluence with Big Bug Creek. The river bottom varies from quicksand to a boulder-strewn streambed. In sections where the channel becomes v-shaped, periodic floods scour the stream bed free of vegetation. Where cattle have been excluded from the banks, mature galleries of cottonwood, willow, and sycamore trees grow thick and tall. Also present are bosques of mesquite, cattails, and sedges.

Fish and Wildlife: The thick vegetation nurtures many bird species,

including wintering bald eagle, zone-tailed hawks, and migrating waterfowl. The Agua Fria is one of only a few rivers occurring in the desert at the low elevation of 2500 feet and still flowing freely. The water is a magnet for many wild species including javelina, racoon, badger, coyote, mule deer, pronghorn antelope, Arizona southwestern toad, lowland leopard frog and Mexican garter snake.

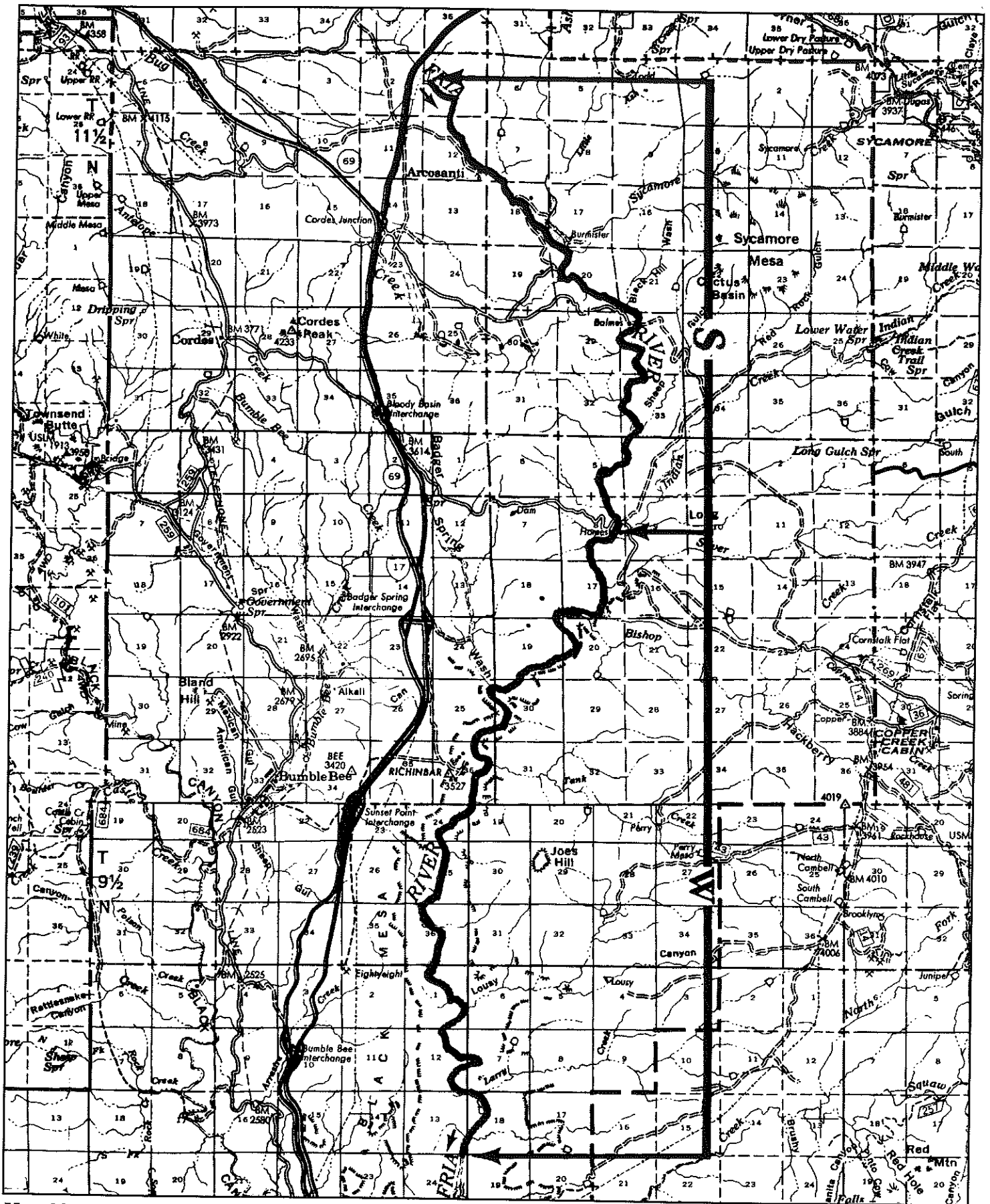
Fish include a population of Gila chub and longfin dace with Gila topminnow in a tributary. More definitive surveys for fish and amphibians await completion of Bureau of Land Management land acquisitions.

Cultural: Archaeologically, the Agua Fria is among the most significant rivers in the state. The river was a major north-south corridor for the prehistoric Salado and Hohokam Cultures dating back over 1200 years. A large concentration of petroglyph and ancient ruin sites remain along the river and on the surrounding mesa tops. Vandalism of some sites has already occurred.

OTHER CONSIDERATIONS

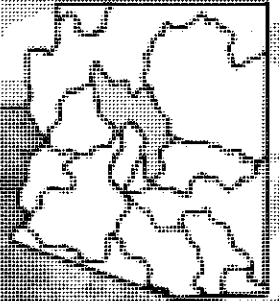
A few ranches pump groundwater or divert surface water from the river for irrigation of fields. In past times, the Agua Fria flowed perennially, but now suffers from withdrawals that have slowed and, in places, dried up the flow during droughts. No active mining sites are present.

The proposed segment should be designated as a Wild and Scenic River to ensure protection of its outstandingly remarkable recreational, ecological and archeological values. Furthermore, designation of this segment of the Agua Fria River would offset the adverse ecological effects of the New Waddell Dam. Moreover, this proposal is compatible with management plans for the dam and the Central Arizona Project because the resulting improvements in riparian quality on the segment would result in slower, steadier and cleaner flows into the lake. There is great potential for recovery and improvement of riparian values in many portions of the proposed 18 mile Wild and Scenic River segment of the Agua Fria River.



Map 28 - Agua Fría River

VERDE RIVER BASIN



WEST CLEAR CANYON (Photo: Nick Bergquist)

Verde River (lower)

This section of the Verde flows through an extraordinarily wild and remote section of Sonoran desert. Cultural development is limited to four-wheel drive access at Red Creek, and two-wheel drive access at Sheep Bridge. The river is perennial, free-flowing, and always boatable in canoes or other shallow draft craft. Rapids are class one or low class two. The river contains many deep pools.

ARC RECOMMENDATION

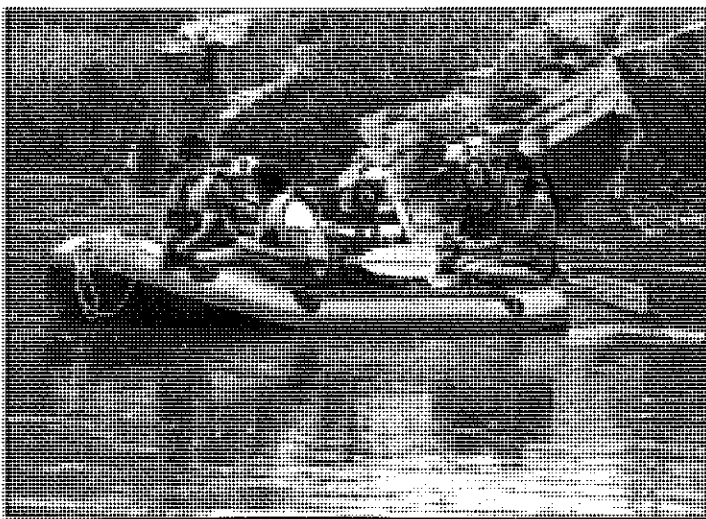
10 miles from Red Creek to Horse Creek Canyon at the Sheep Bridge: Wild

Managing Agency: Tonto National Forest
Private Land: None

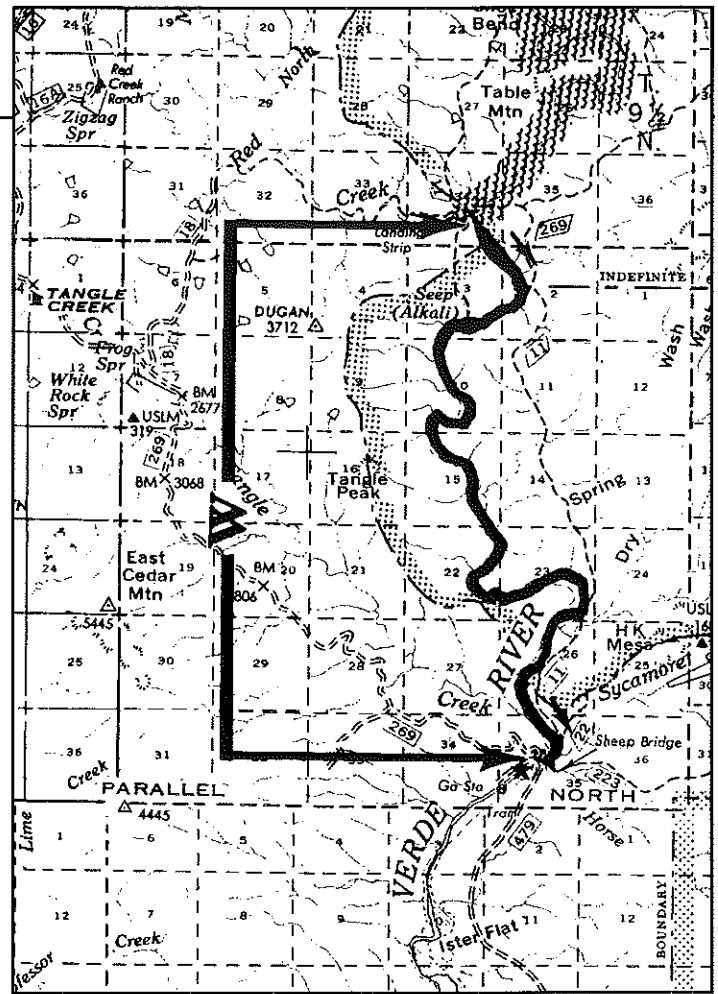
OUTSTANDINGLY REMARKABLE VALUES

Recreation: This section always has enough water for low-water boating. It is often used by boaters as part of a trip from Childs to the Sheep Bridge or Horseshoe Dam. A number of private companies hold permits to run commercial rafting trips on this section. There are also a number of established trails along the Verde which are used by both hikers, horsemen, fishermen, hunters, birdwatchers, and day use. There is excellent fishing for non-native sport fishes.

Fish and Wildlife: Year round flow of the river supports an incredibly lush riparian flora of cottonwood, marshes, and reeds. The segment is a critical habitat for birds including migrating and desert-nesting bald eagle, blue heron, egret, and water fowl. Other unique species found in the area include river otter, javelina, bear, desert bighorn sheep and Mexican garter snake. Endangered Colorado squawfish have been reintroduced as an "experimental, non-essential" population, and endangered razorback suckers are reintroduced under full protection of the Endangered Species Act.



VERDE RIVER, LOWER (Photo: Tim Flood)



Map 29 - Verde River, lower

Cultural: Outstanding cultural resources include numerous sites of prehistoric Sinagua Indian habitations, and the Sheep Bridge on the National Registry of Historic Places. Since there has been no active exploration into this remote area, the full extent of cultural resources is not known.

OTHER CONSIDERATIONS

This section was excluded from a draft environmental impact statement done by the Forest Service at the request of power and flood control interests. That same study states that this section has all of the values of the section immediately upriver which has been designated as a federal Wild & Scenic River. Congress has chosen not to fund Cliff Dam and the Rio Salado Project has been changed so that upstream flood control as provided by Cliff is not required. These actions remove any impediment to designating this section of the Verde River as a Wild & Scenic River.

East Verde River

Several springs join under the Mogollon Rim north of Payson to form the East Verde River. The river flows in a narrow, rocky channel in canyons through mixed conifer forests in the upper reaches, to chaparral woodlands in the mid-section, to the Sonoran Desert zone. The lower reaches are very primitive, 17 miles being within the Mazatzal Wilderness, and cultural development is low on the remainder. The elevation at the source is 6800 feet, and falls within 18 miles to 5300 feet at the intersection of Route 87. The elevation at the Verde River confluence is about 2480 feet. The river is perennial and free-flowing.

ARC RECOMMENDATIONS

Entire 56 miles from headwaters on Mogollon Rim to confluence with the Verde River as follows:

Headwaters to Forest Road #209: Recreational

Forest Road #209 to Mazatzal Wilderness boundary: Scenic

Wilderness boundary to confluence with the Verde River: Wild

Managing Agency: Tonto National Forest

Private Land: Two ranches plus scattered private cabins in Beaver Valley, Whispering Pines, Verde Glen, and Washington Park below Mogollon Rim.

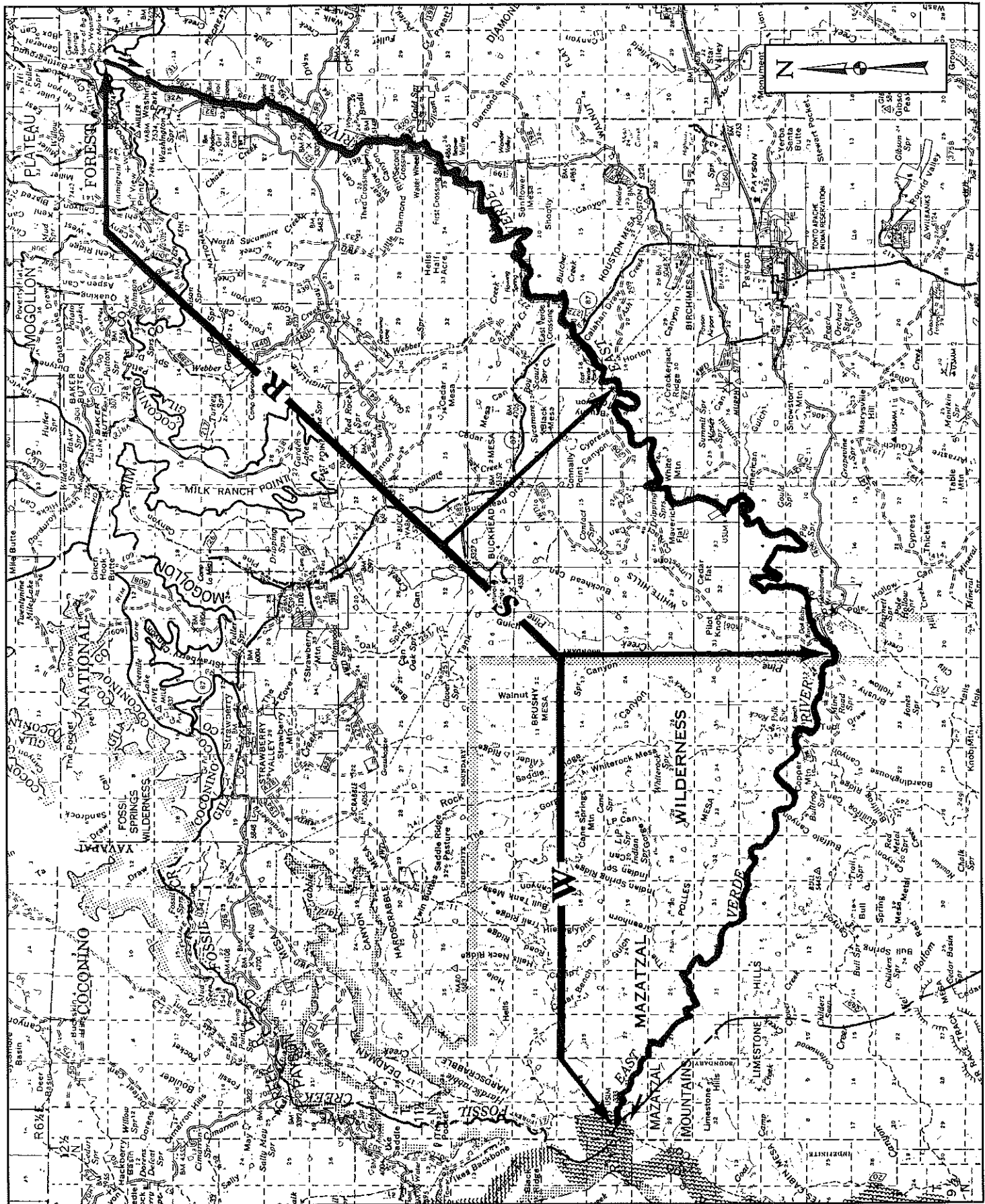
OUTSTANDINGLY REMARKABLE VALUES

Scenic: Flowing in a narrow channel from its source, the river presents visually pleasing sights and water sounds. At the higher elevations, it passes through dense conifer and ponderosa pine forests. Many high cliffs and large boulders make the area visually striking, with some of the finest seams of jasper in the southwest in the canyon walls. The lower section runs through the rugged Mazatzal Wilderness, with breathtaking vistas of the wilderness, ruins, and wildlife dependent upon the river.

Recreation: Camping, backpacking, fishing, birdwatching, hunting,



EAST VERDE RIVER (Photo: Ken Goldman)



Map 30 - East Verde River

and riding are all popular along the East Verde River. Much of the river is easily accessed, and Arizona Game & Fish Department estimates that there are as many as 100,000 user days per year for recreation along the banks of the East Verde.

Fish and Wildlife: As a corridor from upper elevations to the Sonoran Desert life zone, the East Verde River supports many species of special interest. The Chiricahua, lowland and northern leopard frog are known to depend upon the habitat provided by the East Verde. The Gila chub, a federal candidate for listing, is throughout the river. Razorback suckers have been reintroduced under full protection of the Endangered Species Act. Dozens of bird species use this corridor as a migration route. This is an important river to wildlife in the state.

Cultural: While no inventory has been done of the archeological sites, it is estimated by the Tonto National Forest that there are over 100 sites dating from 5000 years ago to relatively recent Apache sites along the river corridor. Pot hunting and other vandalism within some of these sites is an ongoing problem.

OTHER CONSIDERATIONS

The Phelps Dodge Company has an agreement with Salt River Project to pump water into the East Verde, from the Blue Ridge Reservoir. Phelps Dodge has done this for 25 years, and has plans to continue.

West Clear Creek

Five miles west of Clint's Well, Willow and Clover Creeks flow together at the bottom of a deep and narrow canyon to form West Clear Creek. Just above that confluence, the two streams cross the boundary of a wilderness area created in 1984 that stretches almost the entire length of the stream's course to its end at the Verde River. The canyon that West Clear Creek occupies is so deep and narrow that to proceed down it one is required to swim several pools that stretch from canyon wall to wall. Michael Kelsey counted 49 such pools in negotiating only two-thirds of the canyon for his book "Canyon Hiking Guide to the Colorado Plateau." Twenty-eight of those pools he had to swim.

ARC RECOMMENDATIONS

41 miles from headwaters to confluence with Verde River as follows:

Headwaters down to wilderness boundary: Wild

Wilderness boundary to confluence with the Verde River:
Recreational

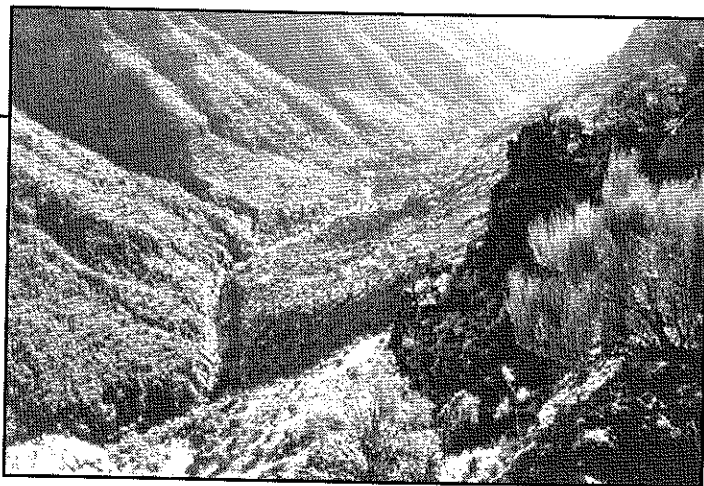
Managing Agency: Coconino National Forest

Private Land: Bull Pen Ranch, which is in the process of being traded to the Coconino National Forest and lower section of river.

This allows them access to water in the Morenci area where copper mines are located. During the summer of 1990, Phelps Dodge had equipment problems which stopped its water pumping for one month. Even at its lowest, however, the East Verde continued to flow and support a population of introduced trout. Wild and Scenic River designation would not affect this agreement.

Inclusion of the East Verde River in the Wild and Scenic River Act will ensure proper management and protection of the fragile upstream riparian areas. Without designation, the East Verde River could sustain losses to its unique values: fishing, birding, scenic vistas, recreation, and archaeology. The management plan can control the impact of the currently heavy use on the upstream segments by an ever-growing urban population in central Arizona. Residents in the upper section are rather distrustful of government intervention in their neighborhood. In 1990, they opposed improvement to the road in the area of the Highline Trail Crossing and the installation of a vault toilet in the area. This distrust may be due to not enough information. Protection of river flows would be to their advantage, and an educational process of the residents is being pursued by Arizona Rivers Coalition.

Designation of the segment within the Mazatzal Wilderness will strengthen the case for an adequate flow of water, without damming or diversion, to protect biologic richness now present.

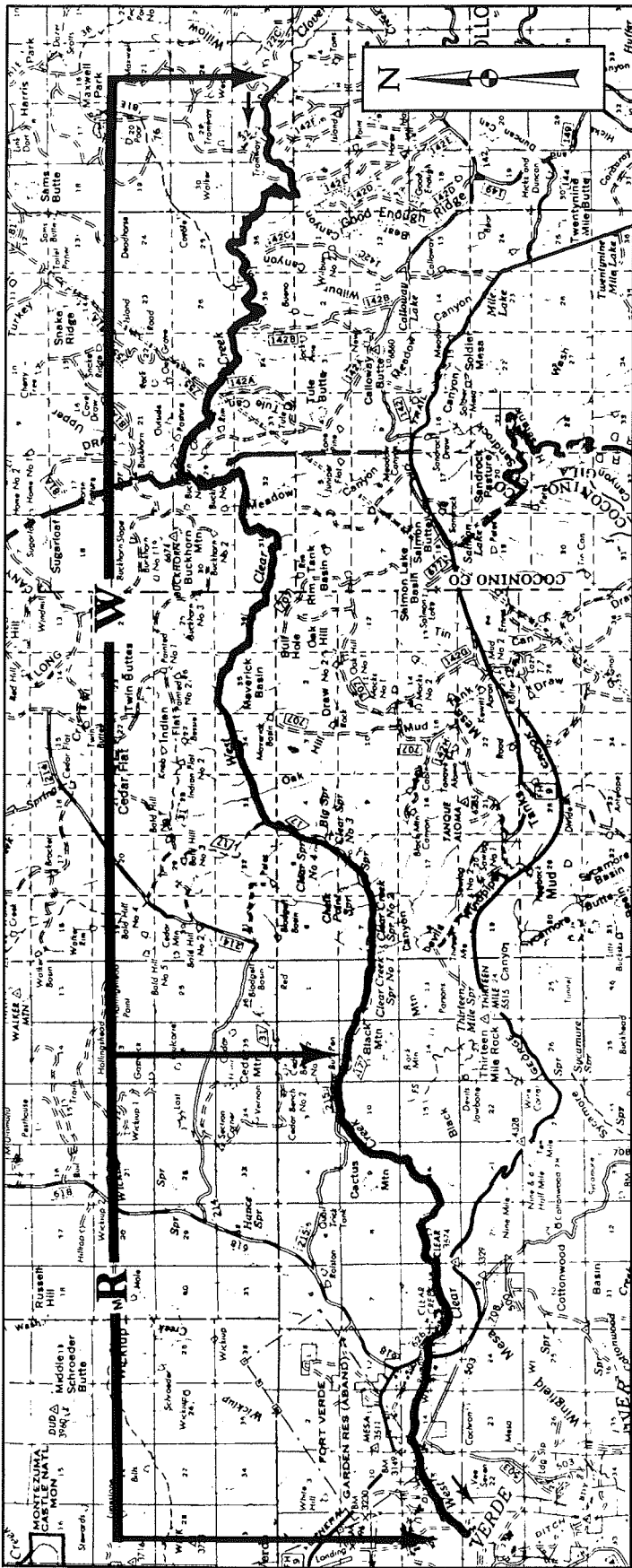


WEST CLEAR CREEK (Photo: Bill Gobus)

OUTSTANDINGLY REMARKABLE VALUES

Scenic: West Clear Creek Canyon is remarkable for its deep narrow passageways cut through red sandstones of the Supai formation. Bright beams of sunlight illuminate the canyon walls while a green filtered glow characterizes the canyon floor hidden beneath a canopy of riparian vegetation. In the fall, maples, poison ivy, willows, and alders offer red and yellow contrasts to the canyon's lush greenery. Scenery is unmatched, ranging from wind and water sculpted red rocks to petrified dunes of buff sandstone and high cliffs of dark basalt.

Recreation: Superior opportunities for solitude and primitive recreation exist as this stream is exceedingly remote for most of its length. For years, trout fishing has been a primary reason for descending the rugged slopes to access West Clear Creek. Trails leading into the canyon from the rim are popular with hikers and backpackers seeking



Map 31 - West Clear Creek

good fishing and secluded swimming holes. It is possible to hike the entire length of West Clear Creek, although swimming and wading best describe the mode of travel through much of the canyons bottom. Trails that lead up from the canyon mouth get substantial use by hikers, anglers, backpackers, and car campers who use the primitive Forest Service campground near Bull Pen Ranch.

GEOLOGIC: West Clear Creek incises the upper surface of the Colorado Plateau at its southern edge, the Mogollon Rim. The stream is a representative rim country stream excavating a narrow canyon that has walls plunging from 5,900 feet in elevation to 4,000 feet in the area near Black Mountain. The upper canyon walls are formed by Tertiary basalt, while the erosion by the creek has revealed Kaibab Limestone, Coconino Sandstone and sandstones of the Supai Formation.

FISH AND WILDLIFE: Federal and state threatened and endangered species that depend on the stream corridor include southern bald eagle, osprey, peregrine falcon, Mexican black hawk, bugbane and an introduced non-native river otter. Mule deer, elk, black bear, mountain lion, coues whitetail deer and other more common animal species thrive along the stream and the surrounding country side. The riparian habitat also supports a diverse avian community. Spikedace formerly occurred near the mouth and at least five other native fishes still live in the creek.

ECOLOGICAL: The forests of the Mogollon Rim and its deeply incised canyons which descend to deserts support some of the most diverse plant and animal communities found anywhere in the United States. Mixed-conifer forests on north-facing cliffs are juxtaposed with chaparral and desert communities on opposing south-facing slopes. Such variety offers nesting habitat for red-faced warblers and other birds which spend the winter in tropical rainforests, and provides for abundant year round residents such as the Mexican spotted owl.

CULTURAL: Prehistoric cliff dwellings, petroglyphs, and artifacts are found throughout West Clear Creek Canyon.

OTHER CONSIDERATIONS

Major threats to West Clear Creek and its ecosystem include the detrimental impacts of cattle grazing, steep slope logging above the canyon rim along the stream's upper reaches and overuse by recreationists near areas of easiest access. There are no impoundments along its length and only a few irrigation ditches withdraw its flow.

West Clear Creek was featured in National Geographic's book, *America's Wild and Scenic Rivers*. In 1984, most of the West Clear Creek watershed was designated as a wilderness area in recognition of its outstanding opportunities for solitude and unparalleled natural beauty. Wild and Scenic designation would be appropriate and compatible to the wilderness designation. West Clear Creek is rich in plant and animal diversity, including representative species from desert, chaparral, forest, and riparian communities. Its striking topography and scenery make it a premier candidate for an Arizona Wild and Scenic River. Unofficially, West Clear Creek is recognized as one of Arizona's wildest and most scenic streams.

Beaver Creek

Beaver Creek is located in north-central Arizona and originates along the windward slopes of the Mogollon Rim. Crossing the northeast corner of Yavapai County, Beaver Creek is a major tributary to the Verde River. Its confluence with the Verde is near the town of Camp Verde. Approximately 8 miles upstream from the Verde, Beaver Creek forks into the sporadically flowing Dry Beaver Creek and the perennial Wet Beaver Creek. The proposed 33 mile segment excludes the Dry Beaver basin and includes the constantly flowing Wet Beaver Creek from the rim to its confluence with the Verde.

Beaver Creek originates in the pine forests of the Mogollon Rim and quickly drops into a rugged sandstone canyon possessing the exceptionally dramatic scenery one would expect of the more famous Oak Creek Canyon north of Sedona. After the narrow canyon opens into pinyon pine and juniper woodlands the creek proceeds into Sonoran desert scrub characteristic of the lower reaches of the Verde Valley. Throughout the segment the creek's continual flow nurtures some of the richest remaining cottonwood and sycamore stands in Arizona.

ARC RECOMMENDATIONS

33 miles from approximately 2 miles south of the Apache Maid Work Station down to the Verde River as follows:

Apache Maid to northern boundary of Section 22 private property near Beaver Creek Ranger Station: Wild

Section 22 property to confluence with the Verde River:

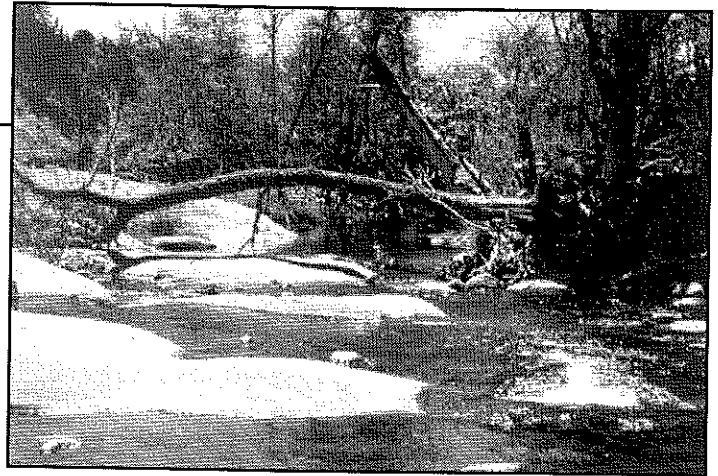
Recreational

Managing Agency: Coconino National Forest and National Park Service.

Private Land: Approximately 9 river miles.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: In the upper region of the segment the creek has eroded deeply into the Mogollon Rim and is characterized by steep topography, lush riparian growth, and numerous pools which reflect the colorful red rock sandstone walls of the canyon. The creek's inherent ruggedness has precluded roadways, subsequently impeding public recognition of the canyon's scenic features. This rugged, preserved beauty has earned most of the upper canyon a designation as wilderness. As the creek emerges from the Rim it nurtures a rich riparian belt lined with cottonwood, sycamore, alder, ash, and willow trees. Approaching its Verde confluence, the creek's dense riparian vegeta-



BEAVER CREEK (Photo: Arizona State Parks)

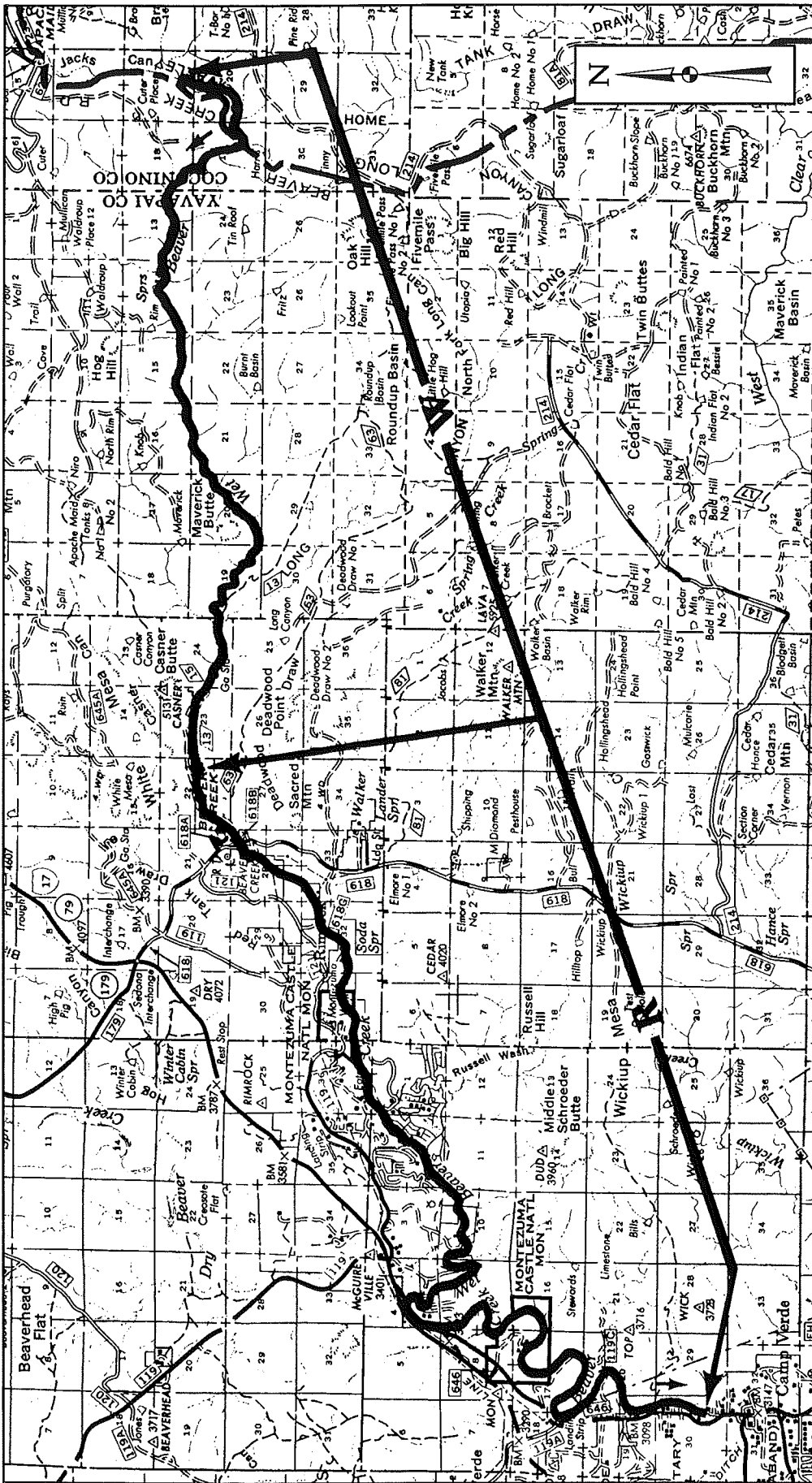
tion continues while desert species such as prickly pear cactus, mesquite, and creosote bush predominate in the surrounding terrain. Numerous Sinagua Indian ruins are present, the most notable of which are Montezuma Castle and Montezuma Well National Monuments, both of which are readily accessible by road and attract many tourists.

Recreation: The upper segment's wilderness designation gives testimony to its striking beauty, which also explains the area's popularity for picnicking, swimming, and both day and overnight hiking. The lower reaches are more easily accessed by automobile and receive extensive recreational use in the form of sightseeing, especially at the two National Monuments. The segment between Montezuma Castle and the Verde can be used for boating during the spring runoff season.

Geologic: Beaver Creek has eroded its upper canyon through the volcanic basalt which forms the top of the Mogollon Rim. As the creek progresses southwesterly, it goes through many of the same sedimentary layers which characterize the Grand Canyon: Kaibab, Toroweap, Coconino, Supai, and Hermit formations. The lower segment features a chalk-like limestone called the Verde formation which is inter-layered with pink silt and sand brought in by ancient streams.

Fish and Wildlife: Besides 21 species of fish and more than 50 different species of birds, the river's riparian habitat hosts the bald eagle, a federally listed endangered species. Federally threatened fish species included spikedace and presently includes the candidate roundtail chub. Endangered bird species include the osprey, common black hawk, and Bell's vireo. The creek's dependable supply of water lures other game and non-game wildlife to the area such as quail, dove, mule and white-tailed deer, javelina, elk, and bobcat. Beavers, from which the creek obtains its name, also inhabit its waters.

Cultural: Prehistoric Indians are believed to have inhabited the Beaver Creek watershed almost 10,000 years ago. Agriculture and the use of pottery emerged around 700 A.D. and trading was established with tribes as distant as central Mexico. Culture in the region substantially increased in the early 12th century along with a surge in the frequency of dwellings along the creek. For still unknown reasons, the area was abandoned by 1425 A.D. Yavapai and Tonto Indians later inhabited the region prior to the first visit by Spaniards in 1583.



OTHER CONSIDERATIONS

The upper segment of Beaver Creek offers the unique opportunity to observe a perennial stream in a steep walled red rock canyon similar to that of Oak Creek without the presence of an adjacent roadway. The creek nourishes an exceptionally rich riparian habitat, with sycamore trees in excess of 6 feet in diameter. The extensive American Indian history found along the banks of the creek give testimony to the waters importance to human as well as animal life of the region. Even though a great portion of this creek is in a wilderness area, Wild & Scenic designation will provide protective and consistent management for the entire length of this deserving river.

Map 32 - Beaver Creek

Oak Creek and West Fork of Oak Creek

Oak Creek has its headwaters in the Sterling Springs area from where it cuts through the Mogollon Rim and flows south to its confluence with the Verde River. High elevations at the source allow for a community of ponderosa pine, where by mid length pinyon and juniper woodlands surround the drainage. West Fork starts at about elevation 7000 feet and joins Oak Creek at about elevation 5000 feet. The last two-thirds is perennial, in a clear, clean, spring-fed and shallow flow.

ARC RECOMMENDATIONS

12 miles of West Fork from Casner Cabin Draw to Oak Creek confluence and 13 miles of Oak Creek from Sterling Springs Fish Hatchery to Midgely Bridge on Highway 89A as follows:

The 12 mile segment of West Fork: Wild

The 13 mile segment of Oak Creek: Scenic

Managing Agency: Coconino National Forest.

Private Land: About 15 percent along Oak Creek, none along the West Fork.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The watershed comprises a transition of great diversity from ponderosa pine and fir forest to live oak-pinyon-juniper and Arizona cypress woodlands, to deciduous sycamores-alders-cottonwoods and ending in desert scrub and grasslands. The Oak Creek area is famous for its red rock and towering cliffs. West Fork is a more intimate canyon where red maples and pine trees grow and cliffs are stained with natural varnish from numerous water seeps.

Recreation: Year round fishing exists in Oak Creek for stocked trout. Hiking may be done over a myriad of trails and forest roads throughout the canyon. Abundant opportunities are present for sightseeing, bird-watching, and for camping and picnicking at established sites. Water enthusiasts can swim in the many pools along the creek or ride down the chute at Slide Rock State Park.

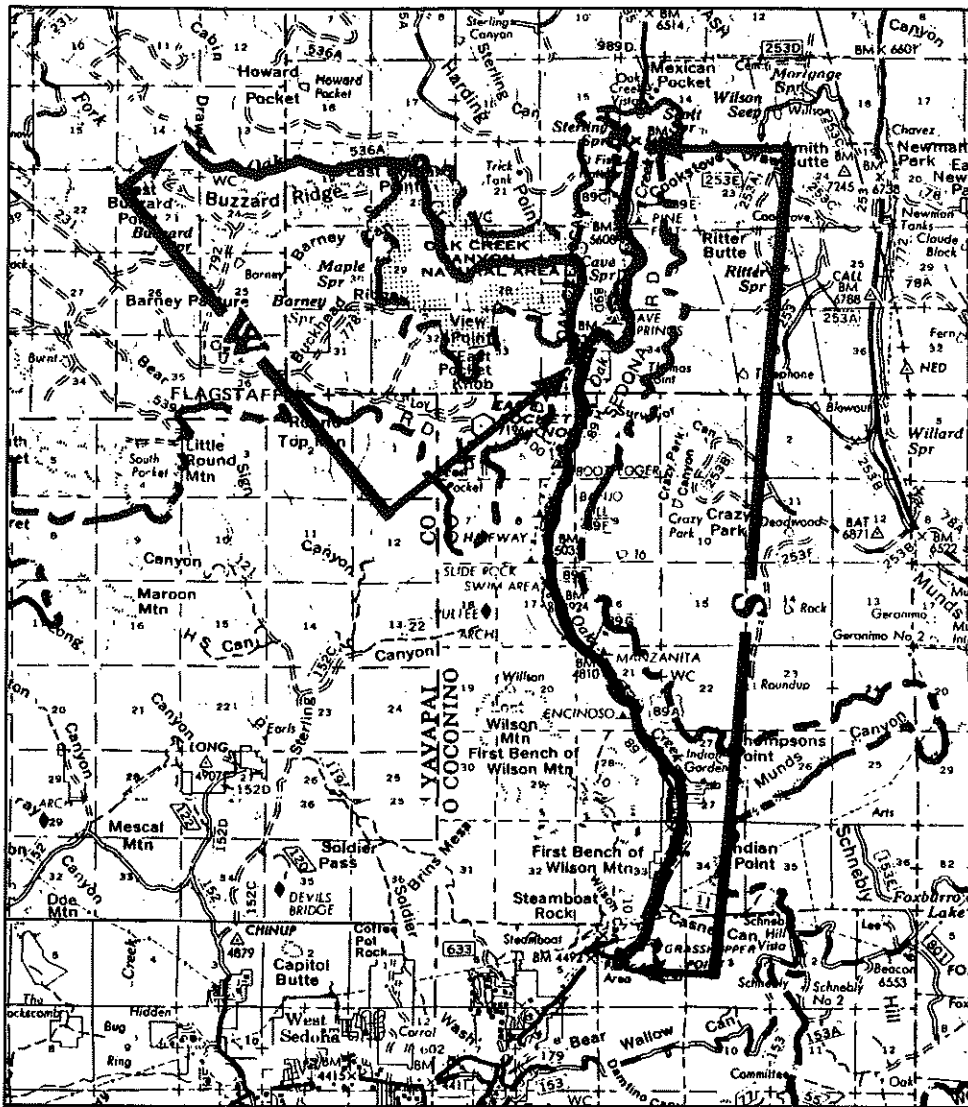
Geologic: Oak Creek flows through some of the most spectacular landforms and geologic materials in Arizona. The stream flows south off the Mogollon Rim, south of Flagstaff, and excavates a canyon system through the Supai Formation, a collection of red sandstones and mudstones that often reveal extensive crossbedding. Black basalt and buff-colored Coconino Sandstone caps the walls. The relief in the area is spectacular, with the canyon floor at an elevation of 3700 feet and Mount Wilson, a short distance to the west, rising to 7100 feet. The complex geologic materials combined with rapid erosion by the creek have produced intricate erosion forms with pillars, monoliths and finely etched canyons.



WEST FORK OF OAK CREEK (Photo: Anne Frazier)

Fish and Wildlife: Oak Creek and its side canyons are home to bald eagles, peregrine falcons, osprey, yellow-billed cuckoo, and many more sensitive bird species. Historically it was the home of the river otter and endangered Gila trout. The creek presently supports five or six native fish species, including the candidate Gila and roundtail chubs. Special status species include occult little brown bat, Mexican and narrow-headed garter snakes, Arizona toad, common black hawk and spotted owl. Arizona Game and Fish manages game and non-game wildlife, providing seasonal hunting for deer, elk, quail, bear and squirrel and year-round hunting for other mammals and birds.

Ecological: Clear clean spring water and diverse and lush riparian vegetation provides habitat, cover, food and drink for wildlife. Along the upper reach of West Fork, there is one of only a few occurrences in the state of a blue spruce association/vegetation community. This stand of blue spruce is at an elevation range lower than expected due to the shade provided on the steep north facing canyon wall. Arizona bugbane, a special status plant species which occurs in scattered localities in both Oak Creek and West Fork, requires a particular habitat with moist soils in deep-shaded canyons.



Map 33 - Oak Creek and West Fork of Creek

Cultural: In Oak Creek the upper canyon contains hunting camps and rock shelters from an early occupational period. From Steamboat downstream there are more than 50 known Indian sites. The agricultural southern Sinaguas were established from about 600 A.D. to 1400 A.D. Evidence also points to Apache and Pai groups in the area about 100 years before the Spanish arrived. Zane Grey had a cabin near the confluence of West Fork and Oak Creek and wrote a book titled "Call of the Canyon" about the area.

OTHER CONSIDERATIONS

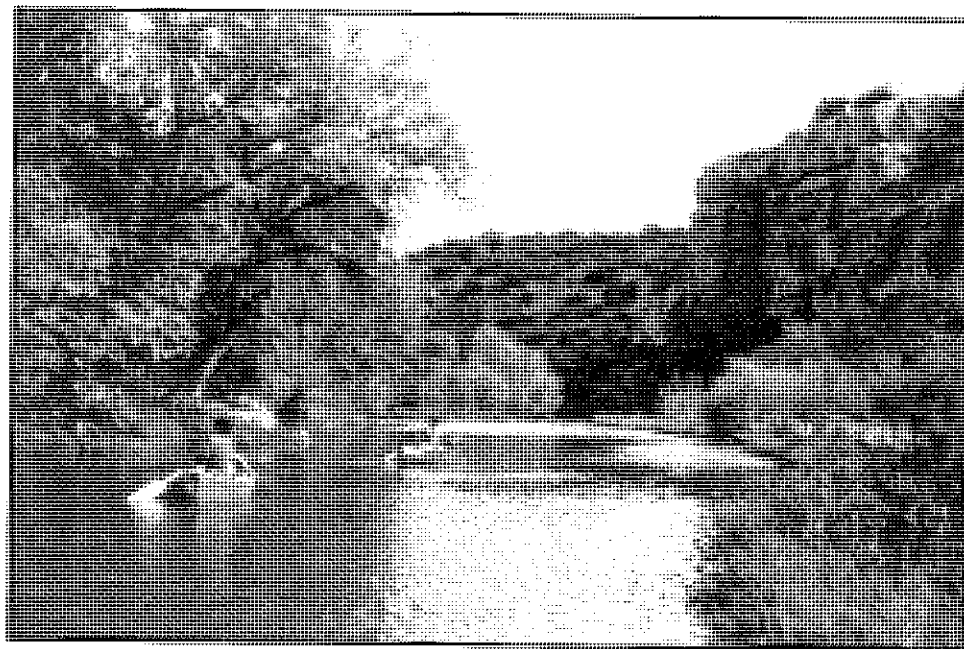
Oak Creek was designated in 1985 as Unique Water of Recreational and Ecological Significance by the State Water Quality Control Council. There is a new regional Interagency Working Team of county supervisors, Forest Service officials, the mayor of Sedona and selected citizens to determine the manner of permanent protection for Red Rock Country, stemming from a desire to keep Forest Service land under the service's jurisdiction. Oak Creek is within the EPA's ADID program (advanced identification of stream areas suitable or unsuitable as disposal fill sites.) Congress designated the Oak Creek Scenic Area

in 1949 from the headwaters to just south of Sedona. West Fork has about 14 miles designated as part of the Red Rock-Secret Mountain Wilderness, with about 6 miles of this length additionally protected by Congress as the Oak Creek Research Natural Area.

For the benefit of present and future generations, many Arizonans and visitors have expressed their beliefs that it is imperative to preserve the unique natural heritage of West Fork and Oak Creek Canyon, which has long lent itself to scientific research. The provisions on the Wild & Scenic Rivers Act could help to permanently protect the spectacular, scenic, geologic formations, clean perennial spring-fed stream with its seasonal waterfalls, balanced ecosystem of eight major plant communities, and diverse wildlife population, which includes some endangered species.

Verde River and Sycamore Creek

The upper Verde River originates in Big Chino Valley north of Prescott and flows for 38.5 miles before entering private land near Clarkdale. The course follows the southwestern margin of the Mogollon rim and is characterized by steep-walled canyons to the north and buttes and mesas to the south. This otherwise unprotected stretch of the Verde contains one of the most diverse native fish communities remaining in the desert Southwest with a thriving population of six native species. The Forest Service has determined that this section of the Verde meets the criteria for a recreational river.



ARC RECOMMENDATIONS

33 miles from Prescott National Forest boundary near Paulden to the north edge of private lands at Clarkdale in Section 33, T17N, R3E. Also 4.2 miles of Sycamore Creek tributary from source at Parsons Spring to the confluence as follows:

33 miles of Verde River from entrance into Prescott National Forest near Paulden to north edge of private lands near Clarkdale:

Recreational

Sycamore Creek from mouth to edge of Sycamore Wilderness

area: Scenic

Sycamore creek from Parsons Spring to edge of Sycamore

Wilderness area: Wild

Managing Agencies: Coconino and Prescott National Forests.

Private Land: 6.7% of total.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The upper Verde River and Sycamore Creek terrain is highly varied and distinctive, ranging from intimate canyons where the river spans from vertical wall to wall, to open areas affording vistas of the Mogollon Rim escarpment. Distinctive sections of Grand Canyon-type geology provide great contrasts in color and texture. Red and white limestone walls reach as high as 700 feet within one fifth of a mile from the river. Numerous deep pools, grottoes, caves, seeps, and springs further provide great scenic value. The vegetation is also highly varied and distinctive with much contrast between the riparian species

VERDE RIVER (Photo: Jim Slingluff)

along the river corridor to desert grassland species within sight up along the cliffs and slopes away from the river. Blooming cliffrose in the spring, and cottonwood, oak, mesquite, hackberry, and walnut trees in the fall provide dramatic displays of seasonal color. Parsons and Summers Springs, the perennial source of Sycamore Creek offer spectacular scenery unique to the rugged terrain of the Mogollon Rim.

Fish and Wildlife: Outstanding fish and wildlife values result from the high quality habitat for threatened, endangered and native species. The Arizona Game and Fish Department has designated the upper reaches of the Verde as Wildlife Resource Category I. Habitats in this category are "of the highest value to Arizona wildlife species, and are unique and/or irreplaceable on a statewide or eco-region basis." The presence or suspected presence of 21 threatened, endangered or special interest wildlife species is sufficient to support the unique status of the upper Verde. Known federally protected species are the desert bald eagle, peregrine falcon and the spikedace.

The upper Verde River is rare among Arizona streams and rivers in that it still maintains a strong native fish community. In addition to the federally protected spikedace, native species include the longfin dace, desert sucker, Sonora sucker, candidate roundtail chub and speckled dace. These native species are able to dominate over such introduced species as the red shiner, mosquitofish, yellow bullhead, carp, channel catfish, and smallmouth bass, which dominate all river segments below TAPCO. The mouth of Sycamore Creek also supports the same native fishes.

Other species of significant interest are the reintroduced populations of river otter, razorback suckers, Colorado River squawfish and Mexican garter snake, as well as the native bobcat, mountain lion, beaver, grey fox, coyote, raccoon, ringtail cat, green-wing teal, blue-wing teal, cinnamon teal, mallard, common merganser, quail, and wild turkey, and white-tailed deer.

Cultural and Historic: Only limited surveys have been conducted along the upper Verde River corridor and tributaries, however, information gained from the recorded sites shows the area to contain historic and cultural values. Many of the sites are considered geographically significant and also represent an important era in the development of the Southwest. Further investigation is expected to produce many sites of National Register significance. Confirmed prehistoric sites from the Southern Sinagua and Yavapai cultures can be found all along the Verde Valley. Historic sites include Verde Valley Railroad, a narrow gage railway constructed in 1911 to connect Clarkdale with the Ash Fork-PreScott Railroad.

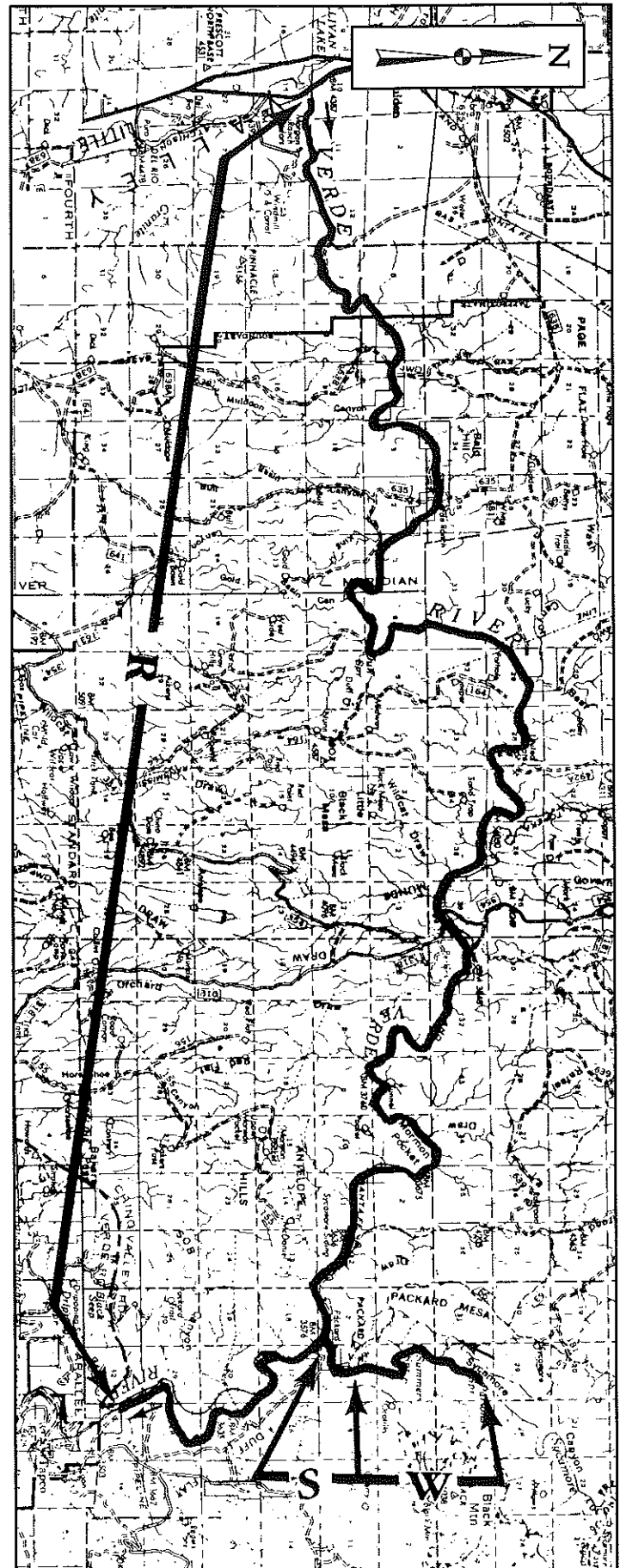
Recreation: Due to the unique qualities of this or any desert stream, residents of the Verde Valley and others have relied on the river for a variety of activities. Among these are hunting, fishing, camping, picnicking, bird and wildlife watching, swimming, and boating. The value of the upper Verde has been underestimated in terms of opportunities for boating. Because the water levels are relatively constant all year, canoeists and kayakers can float this stretch during any season. The upper Verde constitutes one of Arizona's best floarable reaches that provide high quality wildlife viewing.

Geologic: Much of the unique geology of the Southwest can be found along the Verde river. Formations typically found in the Grand Canyon such as the Redwall and Muav Limestone and the Supai Formation are along the river channel in the canyon just below Perkinsville and in the small canyons just downstream from the U.S. Mine. These formations create a variety of interesting grottoes, overhangs, ledges, window rocks, and balancing rocks. Sycamore Creek offers exciting geological variety as it drops through the Mogollon Rim.

OTHER CONSIDERATIONS

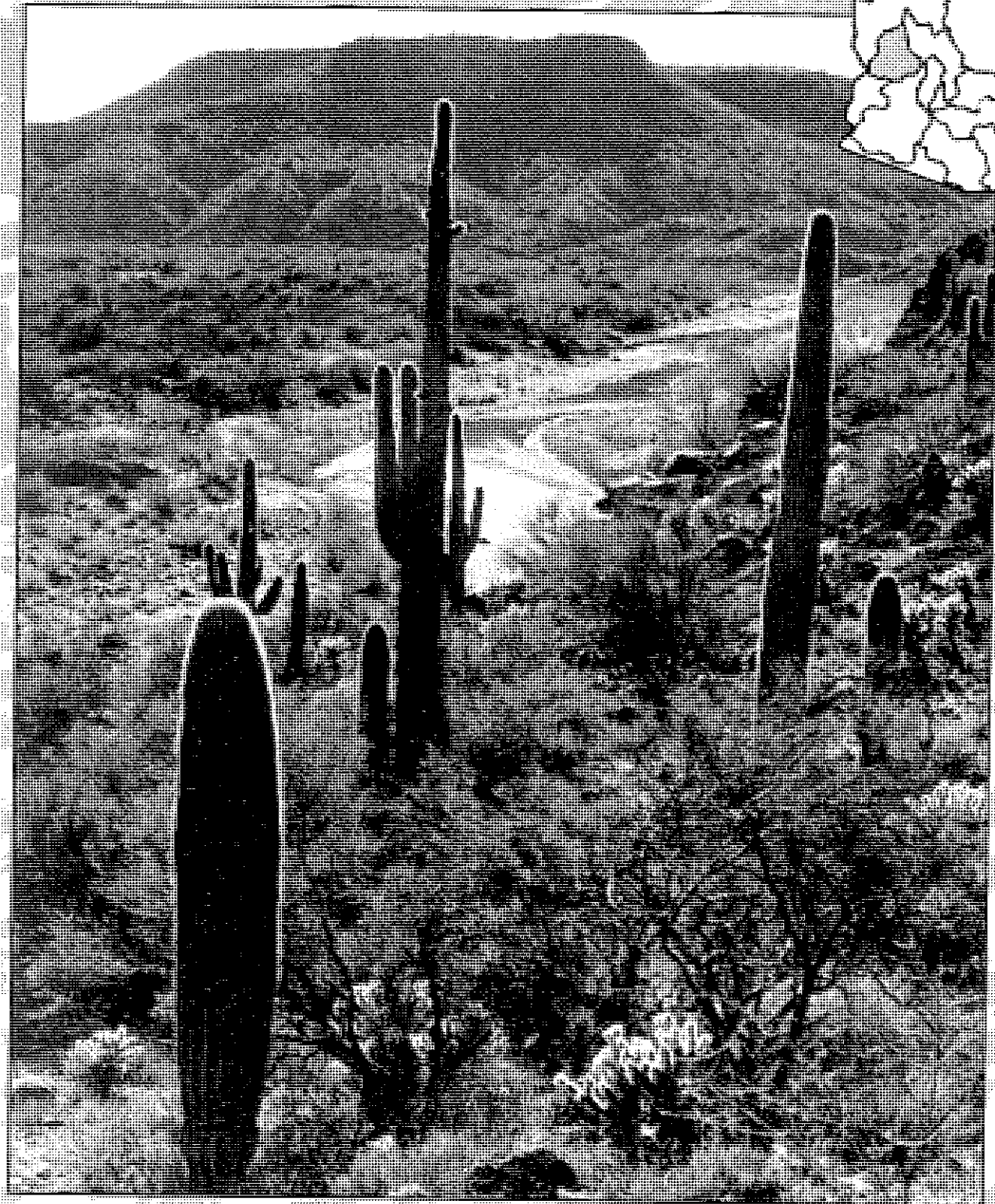
As with all desert riparian habitats, the upper reach of the Verde River is one of the rarest habitat types in North America. Headwaters of the Verde are home to two federally endangered species - the southern bald eagle and peregrine falcon, one federally threatened species - the spikedace, and 10 species listed by the State of Arizona as threatened or endangered. In addition, this otherwise unprotected stretch of the Verde is one of the most diverse native fish communities remaining in the desert Southwest with a thriving population of six native species. The wildlife habitat value of the Verde River results in significant economic, recreational and aesthetic value. Resident recreation is not only of economic value, but also it provides the quality of life unique to the Verde Valley.

There are imminent and serious threats to the free-flowing character and outstandingly remarkable features of the upper stretches of the Verde River. These threats include private development, water diversion, proposed dams and unmanaged use. Wild and Scenic River designation of the upper Verde may be the best way to provide long-term care of the natural resources while allowing current uses to persist in a manner compatible with protection.



Map 34 - Verde River and Sycamore Creek

BILL WILLIAMS RIVER BASIN



Salva Maria River (Petrified Juniper)

Burro Creek

Burro Creek rises at 5,310 feet in the Luis Maria Baca Float #5, an old Spanish land grant, and flows southward to the Big Sandy River, a tributary of the Bill Williams River. The upper section of Burro Creek is diverse both in the number of species it supports and the scenic qualities of the river and surrounding vistas. The riparian vegetation is lush and varied, with the river banks literally springing to life due to the presence of water. Juniper trees and saguaros grow in the same area on the surrounding hills, one of the few places in Arizona where this plant association occurs. The lower stretches of the river also contain variety in wildlife and geology, with an abundant riparian community. The canyons give way to a barren beauty with much geologic diversity. Burro Creek is perennial and free flowing along its entire length, although the portions of the lower stretch may be reduced to pools in very dry years.

Francis Creek is perennial downstream of the thermal springs which are about seven miles upstream of Burro Creek. During low rain seasons, it is estimated that Francis Creek supplies approximately 85% of the downstream flow in Burro Creek.

ARC RECOMMENDATIONS

62 miles from Scratch Canyon (below the Luis Maria Baca Float No. 5) to the confluence with Big Sandy River, including seven miles of Francis Creek as follows:

19 miles from Scratch Canyon to Francis Creek: Wild

7 miles of Francis Creek from confluence with Burro: Scenic

13 mile of Burro Creek from Francis Creek to Boulder Creek: Wild

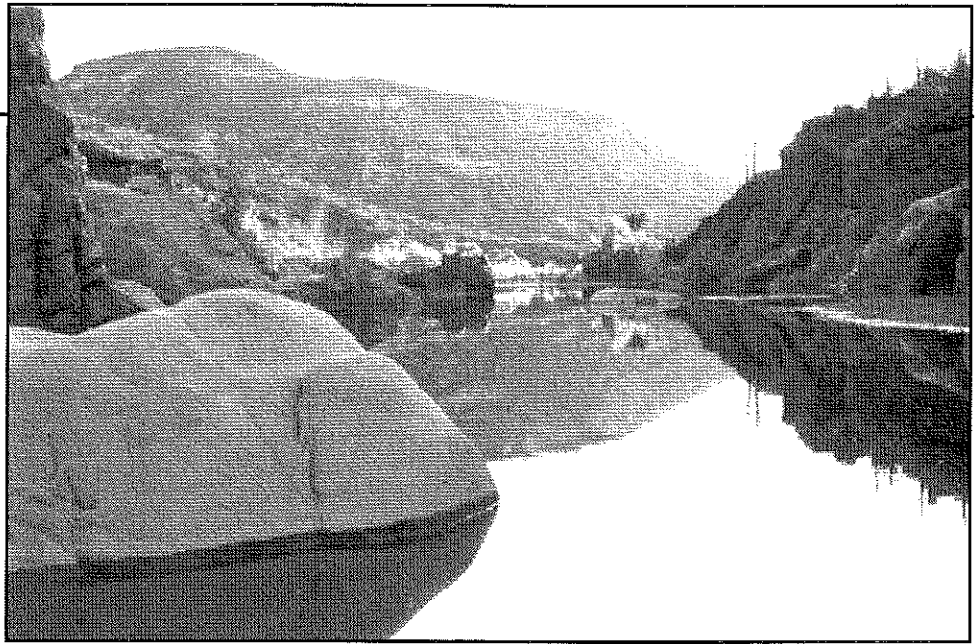
6.5 miles from Boulder Creek to Six-Mile Crossing: Wild

9.5 miles from Six Mile Crossing to Burro Creek campground: Wild

14 miles from Burro Creek campground to the Big Sandy River: Wild

Managing Agencies: Bureau of Land Management and Arizona State Land Dept.

Private Land: Approximately 10%, all on the lower reaches.



BURRO CREEK (Photo: Jean Marie Haney)

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The river runs through terrain of incredibly varied geologic and scenic quality. There are gorges, narrows, pools of clear water, cascades, and wide open, gentle stretches. In some sections, high rock walls line deep pools with up to five-foot high waterfalls. The shorelines are "largely uncluttered by activities of man" in the words of the Bureau of Land Management (BLM). The canyon walls give way to many side canyons, which provide incredible scenery, and oasis-like wildlife and vegetation. The riparian vegetation provides scenic relief in the arid desert.

Recreation: Miles of canyons and valley provide abundant recreational opportunities. The BLM has stated that "recreational opportunities (are) unmatched in this area."

Geologic: The geology of the Burro Creek watershed is complex, manifesting evidence of several distinct periods of volcanism. Areas of undivided schist, granite, and silicic volcanic rocks may be found in the Boulder Creek drainage, interspersed with Precambrian granites and quartz monzonite. Breccia pipes, extinct volcanic structures, and extensive faulting remain in the Burro Creek drainage, testifying to the area's violent geologic past. Gila conglomerate and related deposits of Tertiary origin form the major sedimentary rock types in the area, and are found along the bottoms of the river valleys. The headwaters flow across recent Tertiary volcanics, mostly basalts, and incise precambrian granite gneiss further downstream.

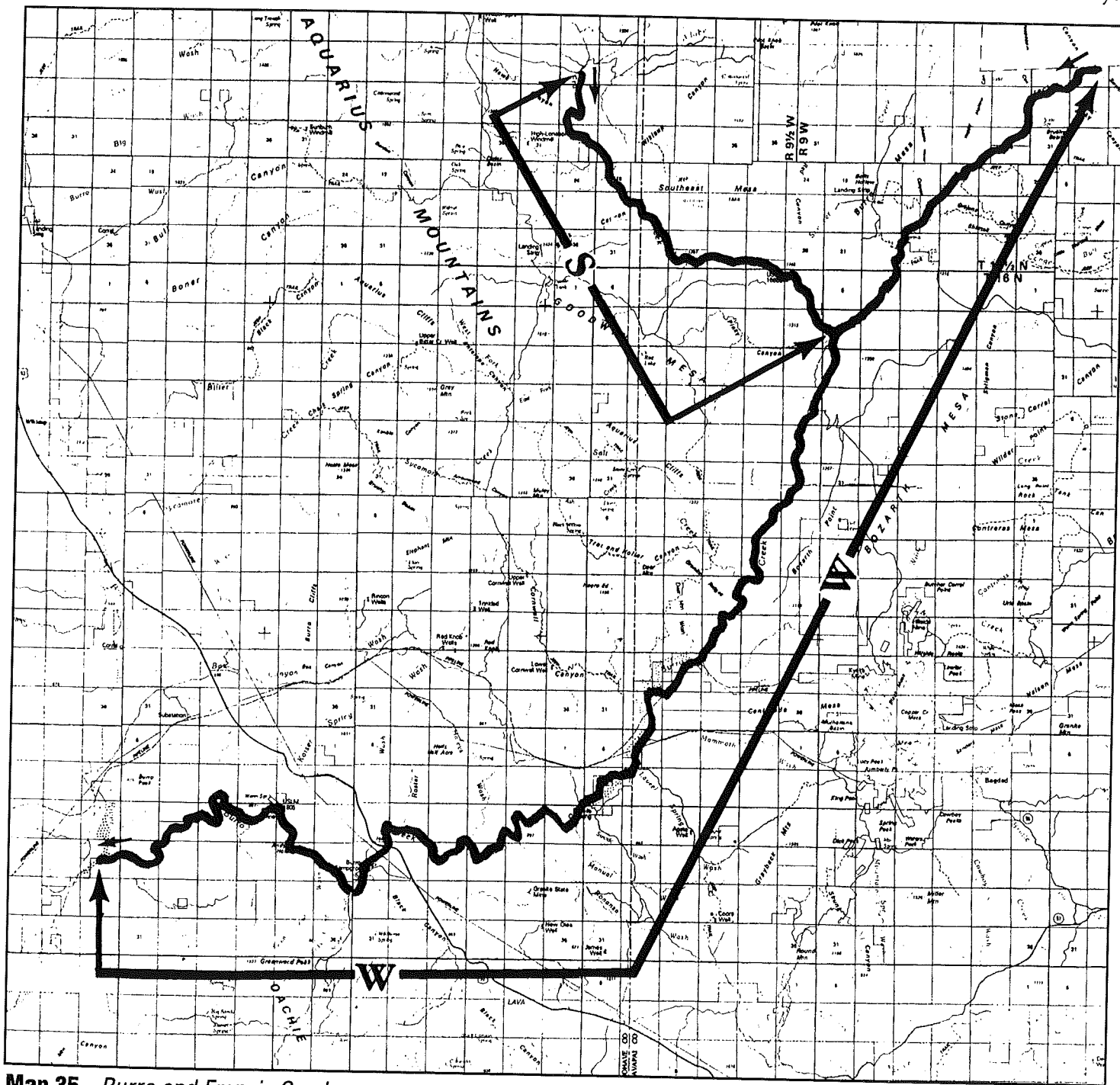
Fish and Wildlife: Wildlife in the area is diverse and abundant, owing to the richness of topographic and vegetative diversity, and the availability of permanent water. There are 267 vertebrate species in the area, 150 of which are birds, and 17 of which are listed under some special status. The fish are mostly native, and include the candidate roundtail chub. There is an extensive population of lowland leopard frogs and the southern bald eagle nest here. The BLM stated that "no other area in Arizona enjoys the same diversity of wildlife." They also said that "the riparian habitat associated with this area supports the greatest recorded diversity of birds of prey anywhere in the United States."

Ecological: The most outstanding ecological value of Burro Creek is its importance as one of the few remaining healthy riparian areas in Arizona. It is essential for the survival of many species and "provides a major stronghold for...riparian dependent species" (BLM). There are six major plant communities in the area; the palo verde/saguaro, the juniper/pinyon, the interior chaparral, the cottonwood/willow, the mesquite bosque, and the mixed broadleaf communities. The Fremont cottonwood/Goodding willow community has been described by the Wilderness Society as the "rarest forest in North America." Portions of Burro Creek have been designated as "unique waters" by the state of Arizona, due to the exceptional quality of the water.

Cultural: The Burro Creek river corridor contains many sites of prehistoric cultural value. It was a place where the Prescott Culture of the Patayan people made their homes in the early part of this millennia. Important petroglyph sites have been discovered on canyon walls. A prehistoric obsidian mine was unearthed in the area and dwellings which are the western-most known occurrence of multi-storied stone masonry pueblos of the Prescott Culture from A.D. 1200 are present.

OTHER CONSIDERATIONS

The question may arise as to the ability of Cyprus-Bagdad to pursue mineral exploration or development in areas that have been yet

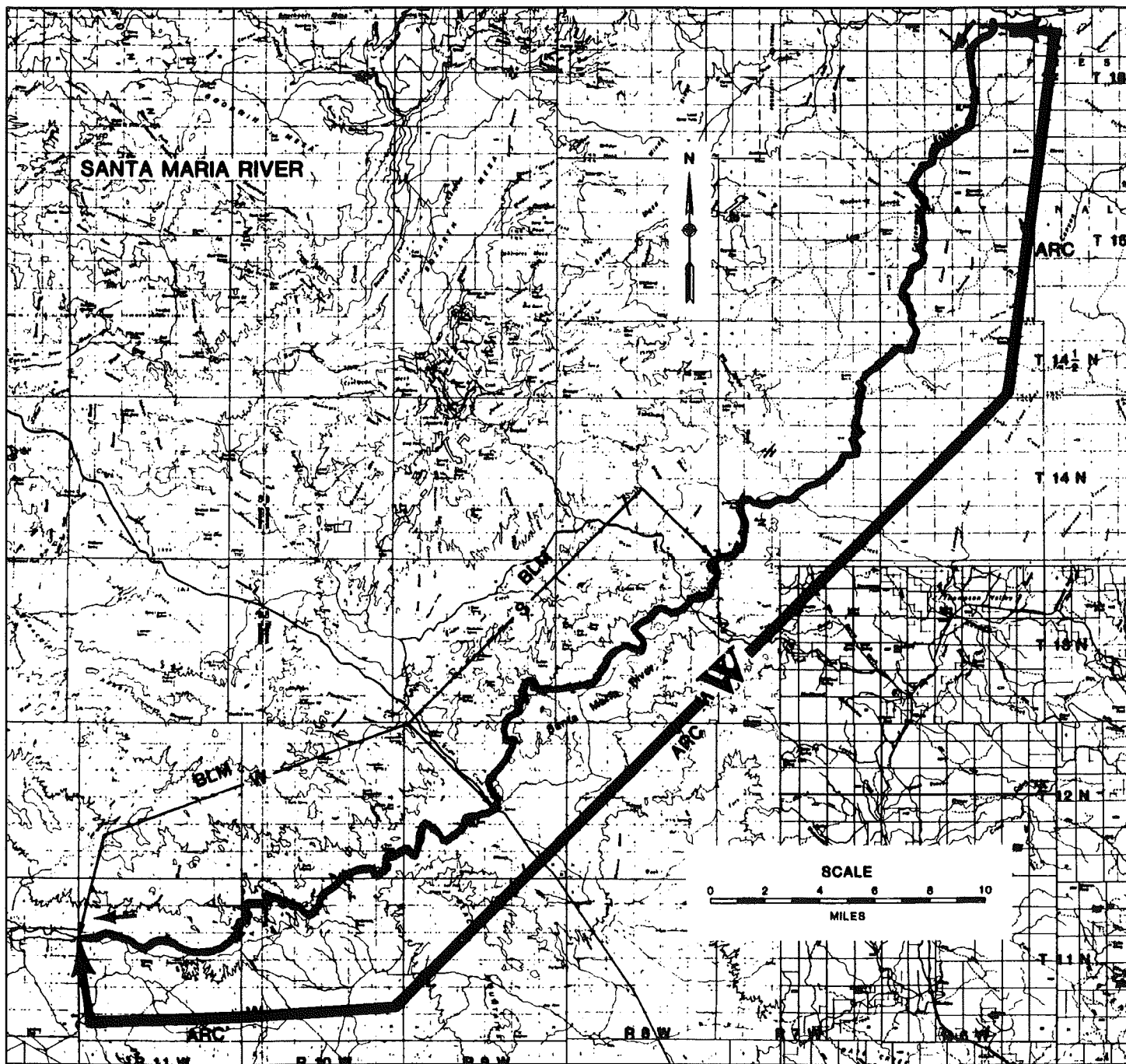


Map 35 - Burro and Francis Creek

untouched. The Kingman Area BLM office found the same 62 miles of Burro Creek as eligible and suitable for scenic designation in their November, 1990 Draft Resource Management Plan and Environmental Impact Statement. There is a dangerous threat to water quality contamination of Burro Creek's waters by mineral development. The BLM has found that "Burro Creek has been contaminated by mine wastes along the creek. Heavy metals contamination has killed invertebrates and fish in the creek and in turn has adversely impacted the rest of the food chain, particularly raptors. Such pollution also creates hazards for people engaged in water-based recreation provided by Burro Creek."

The Burro Creek area is of critical importance because of its valu-

able riparian habitat and its astounding scenic beauty. Arizona has destroyed or damaged much of its lower elevation riparian areas, and those that remain are in dire need of protection. Burro Creek supports an incredible diversity of wildlife and vegetation, which is dependent on the health and vitality of the river waters themselves. The river, vegetation and wildlife are interdependent and completely irreplaceable. The scenic qualities of the river stand out as some of the most rugged and unique in the state. The river needs protection, as any damage done to one of the aforementioned qualities would inevitably affect one or all of the rest, spoiling a truly invaluable portion of one of Arizona's remaining healthy riparian areas.



Map 36 - Santa Maria River

Santa Maria River

The Santa Maria River, northwest of Wickenburg, is one of the few still natural rivers in western Arizona. The terrain surrounding the river is incredibly diverse, as the elevation ranges greatly from the headwaters to the end of the river. The highest elevation at Cottonwood Spring is 5200 feet above sea level, the lowest elevation is at Alamo Lake where the river is 1100 feet above sea level. The river moves from semi-arid uplands with dense riparian vegetation in its permanent headwaters, to arid lowland surroundings near Alamo Lake. This gives rise to incredible diversity in vegetation all along the river corridor.

ARC RECOMMENDATIONS

Entire 80.5 miles from Cottonwood Spring to Alamo Lake as follows:

18 miles from Cottonwood Spring to confluence of Sycamore

Creek: Wild

9 miles from Sycamore Creek to confluence with Kirkland Creek:

Wild

9 miles from Kirkland Creek to Highway 96:

Wild

15 miles from Highway 96 to Highway 93: Wild

29.5 miles from Highway 93 to Alamo Lake: Wild

Managing Agencies: Prescott National Forest, Bureau of Land Management and Arizona State Land Department.

Private Land: A few inholdings.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: As the Santa Maria moves along its course it passes a variety of highly scenic rock formations. There are narrow and steep canyons with many winding turns, open cliff faces, natural arches, sheer-sided pinnacles and highly eroded tufa formations. The river corridor is defined by both open valleys and narrow canyons. When the canyons narrow down, there are steep rock walls that enclose many small pools and cascades. In the open areas, there are mountains and high mesas that surround the canyons and give spectacular views. The 4000 foot drop in elevation means an incredible diversity in vegetation all along the river corridor. The upper section includes ponderosa pines, piñon pines and junipers. Along the lower sections of the river tamarisk, willows, cottonwood, and sycamores line the riparian area with saguaros and palo verdes. All these shorelines are undeveloped, with only a few sections touched by roads, which enhances the scenic enjoyment of this magnificent area.

Recreation: The Santa Maria River provides outstandingly remarkable recreational opportunities by virtue of providing a lush year-round desert oasis. The scenery, wildlife, and vegetation combine to create an area well-suited to recreation activities in the middle of country which would otherwise be inhospitable to recreation much of the year. There are miles of pristine canyons for the hiker, backpacker or horseman. There are awe-inspiring vistas to tempt the photographer. The sportsman too, can find new challenges in the abundance of wildlife produced in the special riparian habitat.

Geologic: The area surrounding the Santa Maria River is typified by a variety of geologic formation. There are exposed cliffs and narrow canyons of basalt, an extrusive igneous rock. There are mountains of volcanic material eroding around the river. There are also unusual formations of volcanic ash, called tufa.

Fish and Wildlife: The riparian habitat of the river supports a recorded 265 species of wildlife, 9 of which are special status species. A short list includes bald eagle, zone-tailed hawk, peregrine falcon, mountain lion, gila monster, desert tortoise, great blue heron, osprey, and owls. The river is a wintering and breeding habitat for bald eagles, and breeding habitat for peregrine falcon.

Ecological: The Santa Maria's most valuable aspect is the fact that it is a healthy, diverse, and productive riparian habitat. One specific plant community is worth special mention, that of the Mesquite bosque. This is a rare riparian forest, and not much of this valuable community is left in the nation. The BLM states that the Mesquite bosques in the Santa Maria area comprise the "largest, healthiest undisturbed habitat of this type in the state." It is also important that the Santa Maria flows thorough one of the only areas in North America where the four deserts of the continent meet in an ecotone. Plants of all four desert types (Upper Sonoran, Lower Sonoran, Mojave, and Great Basin) intermingle and grow together on its banks. This highly unusual plant association needs preservation.

Cultural and Historic: The Santa Maria River's cultural history begins with evidence of the Patayan culture in the river canyon. A total of nine sites have been discovered, including both petroglyph and pictograph panels. Pottery sherds have been found in Peoples' Canyon, a side canyon off the Santa Maria. The Arizona Wilderness Coalition estimates that there are 22,000 culturally sensitive acres surrounding the land that the Santa Maria River passes through. There is also evidence of Spaniards' presence in the river as early as 1604 when Juan De Onate passed through the canyon in a search for a route to the Pacific Ocean.

OTHER CONSIDERATIONS

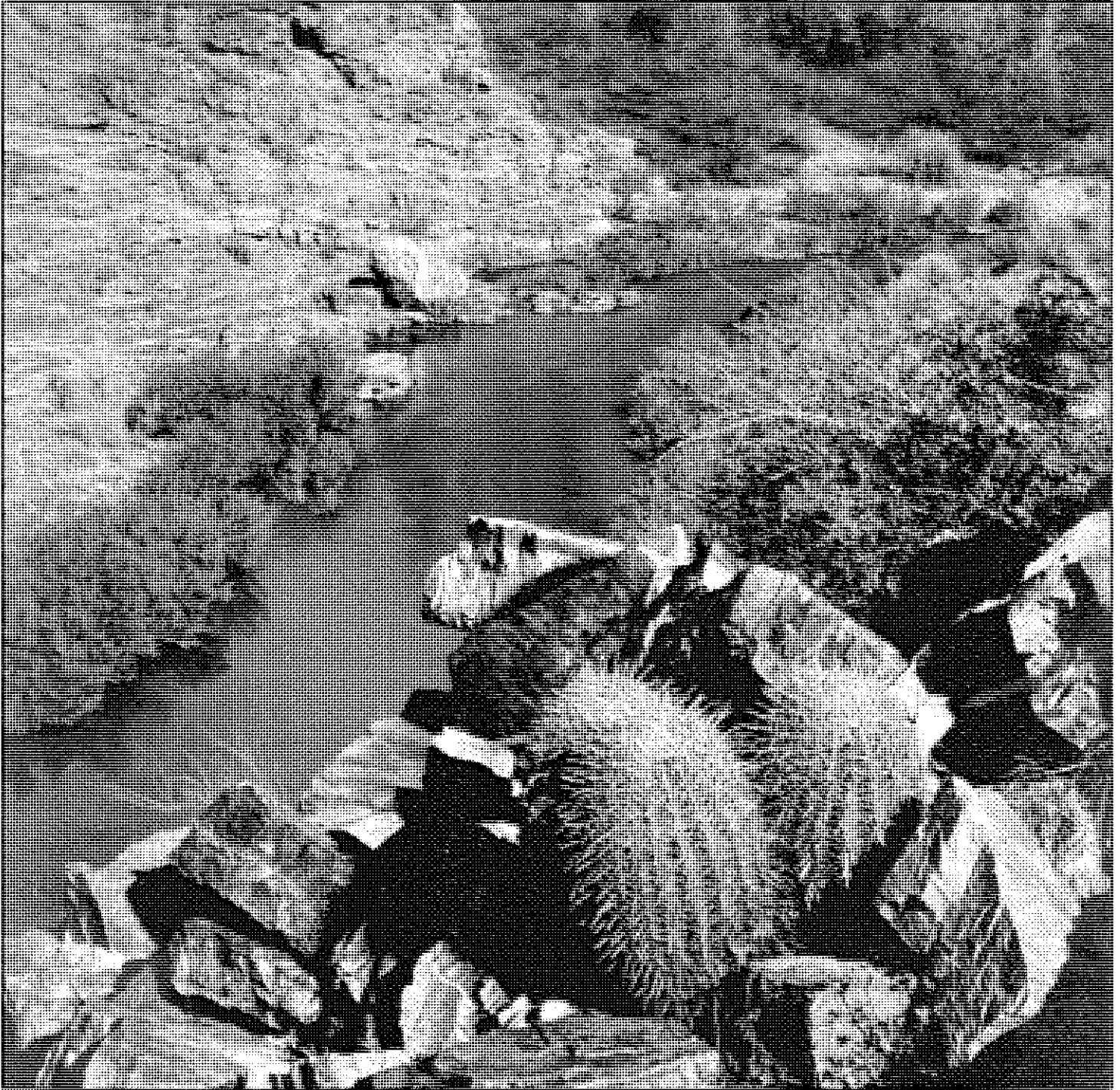
The Santa Maria is one of the longest free-flowing rivers in Arizona, and a vital component in the state's system of riparian habitats. On a BLM prioritized list of management areas, the Santa Maria is placed fifth on the list out of twenty-two. The BLM has also recommended the segment from Highway 93 to Alamo Lake as a scenic river. This river is a long, healthy riparian area, with scenic and biotic diversity, supporting countless species of plant and animal life.

Although there is presently little mineral development in the Santa Maria River corridor, there is a threat of future mineral exploration and extraction in the riverbed. ARC feels that the sections we are recommending as "wild" need protection from possible future mineral development to safeguard the riparian values. Off-road vehicle (ORV) operation in these areas could also be a potential threat to the fragile riparian areas. Designation as a Wild and Scenic River would give the BLM a good management tool in re-routing ORV use away from the river.

BLM has stated that it does not recommend designation of the seg-

ment between the Kingman Resource Area and Highway 96, because of the amount of land that crosses over private and state lands. However, the status of private, state, or federal lands does not need to change with designation, and may enhance the value of the lands.

The Santa Maria is one of Arizona's longest free-flowing rivers, and is a vital component in the state's system of riparian habitat. The BLM sums up the importance of the area with the following quote: "(The Santa Maria River) is one of the most important desert riparian ecosystems in the state of Arizona."



BILL WILLIAMS RIVER (Photo: Don Lyngholm)

Bill Williams River

The Bill Williams River is swift just below the Alamo dam, winding through a 600 foot deep canyon, between Rawhide and Buckskin Mountains. This canyon becomes so narrow that in places a person has to walk in the stream. The Bill Williams River supports strips of riparian woodland along its entire length. The river banks are well vegetated with mesquite, seep willow, inkweed, salt cedar, cottonwood, and arrowweed. These riparian plant communities contrast starkly with the sparse vegetation of palo verde and cactus on surrounding uplands. The river slows and gets shallower farther downstream, with water running sub-surface in the Havasu Resource Management Area during minimum water releases from Alamo Dam. There are no obstructions or impoundments below Alamo Dam.

ARC RECOMMENDATION

22 miles from Alamo Dam to Planet Ranch boundary: Scenic

Managing Agencies: Bureau of Land Management and State Land Department

Private Land: Approximately 4 miles

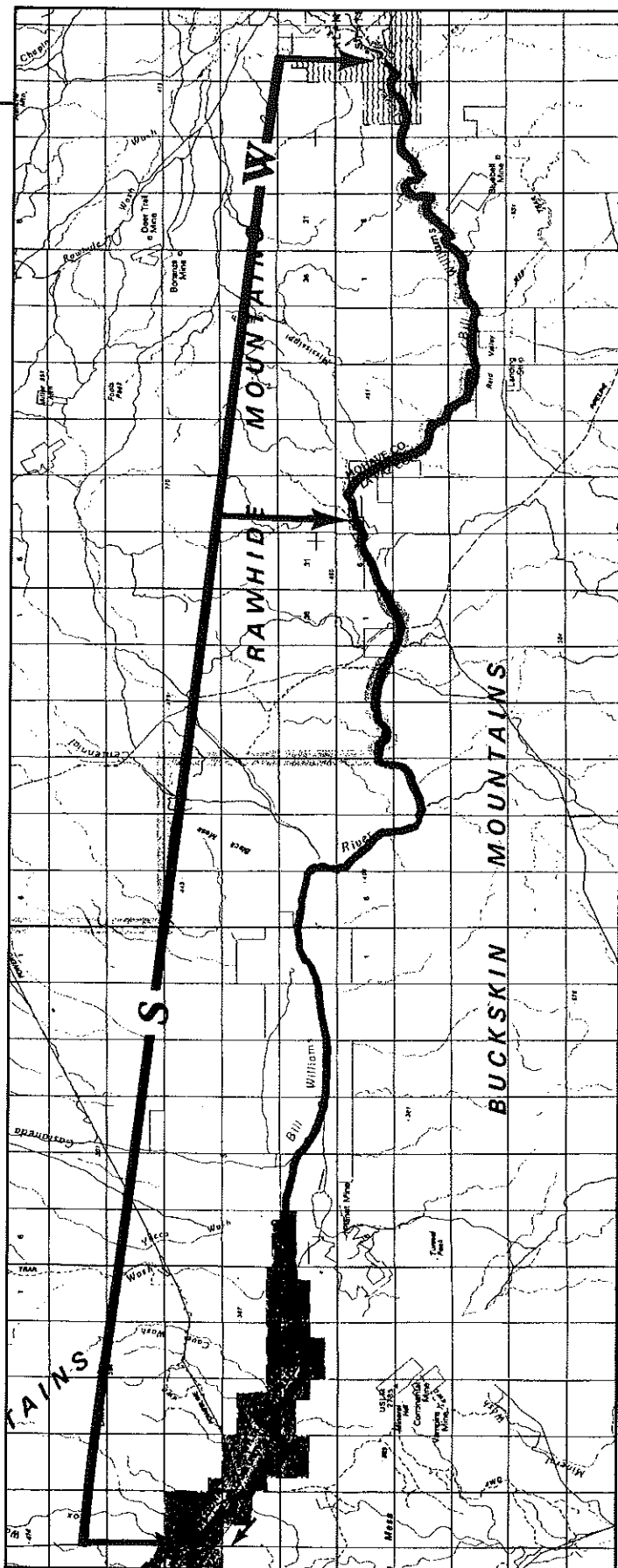
OUTSTANDINGLY REMARKABLE VALUES

Scenic: The Bill Williams River has carved a beautiful, rugged, remote canyon with high cliffs in its upper reaches. The river's lush riparian flora contrast sharply with the sparse desert saguaro and palo verde vegetation above the river. There are steep cliffs with red and brown rock outcroppings. The Banded Canyon stretch of the river is especially dramatic.

Recreation: There are general sight-seeing, hiking and photographic opportunities. Rock-hounding, bird-watching, hiking and chances for solitude abound. People hunt and fish directly below Alamo Dam, and this area sometimes has higher water flows which allow for river rafting.

Geologic: There are steep cliffs with red and brown rock outcroppings of alternating layers of gneiss and schist. The alluvial soils found in the floodplain are formed from granite and/or basalt. Where cattle grazing pressure has been reduced in the Kingman Resource Area, riparian vegetation has come back, soil is beginning to build up and store water for riparian use.

Fish and Wildlife: A pair of bald eagles nest at Alamo Lake just above the dam and use the river corridor downstream. State listed endangered species that can be found include the willow flycatcher, great egret and the California black rail in downstream marshes fed by this flowing reach. Also occurring here are the following species which are listed as threatened in Arizona - yellow-billed cuckoo, snowy egret, ferruginous hawk, osprey, and lowland leopard frog. State candidate



Map 37 - Bill Williams River

species found here are the American bittern, least bittern, common black hawk and belted kingfisher. Also found along the river are the long-billed curlew, Swainson's hawk, white-faced ibis, Arizona Bell's vireo and the Gila monster, which are federal candidate or category species.

Other significant birds found here include the yellow-breasted chat, ruby-crowned kinglet, yellow warbler, Lucy's tanager, vermilion flycatcher, black phoebe, and numerous migrating ducks and geese.

Fish known to occur in the river include green sunfish, red shiner, channel catfish and bullhead catfish. Native fish that may occur here or are historical are the longfin dace, desert sucker, sonora sucker and the roundtail chub.

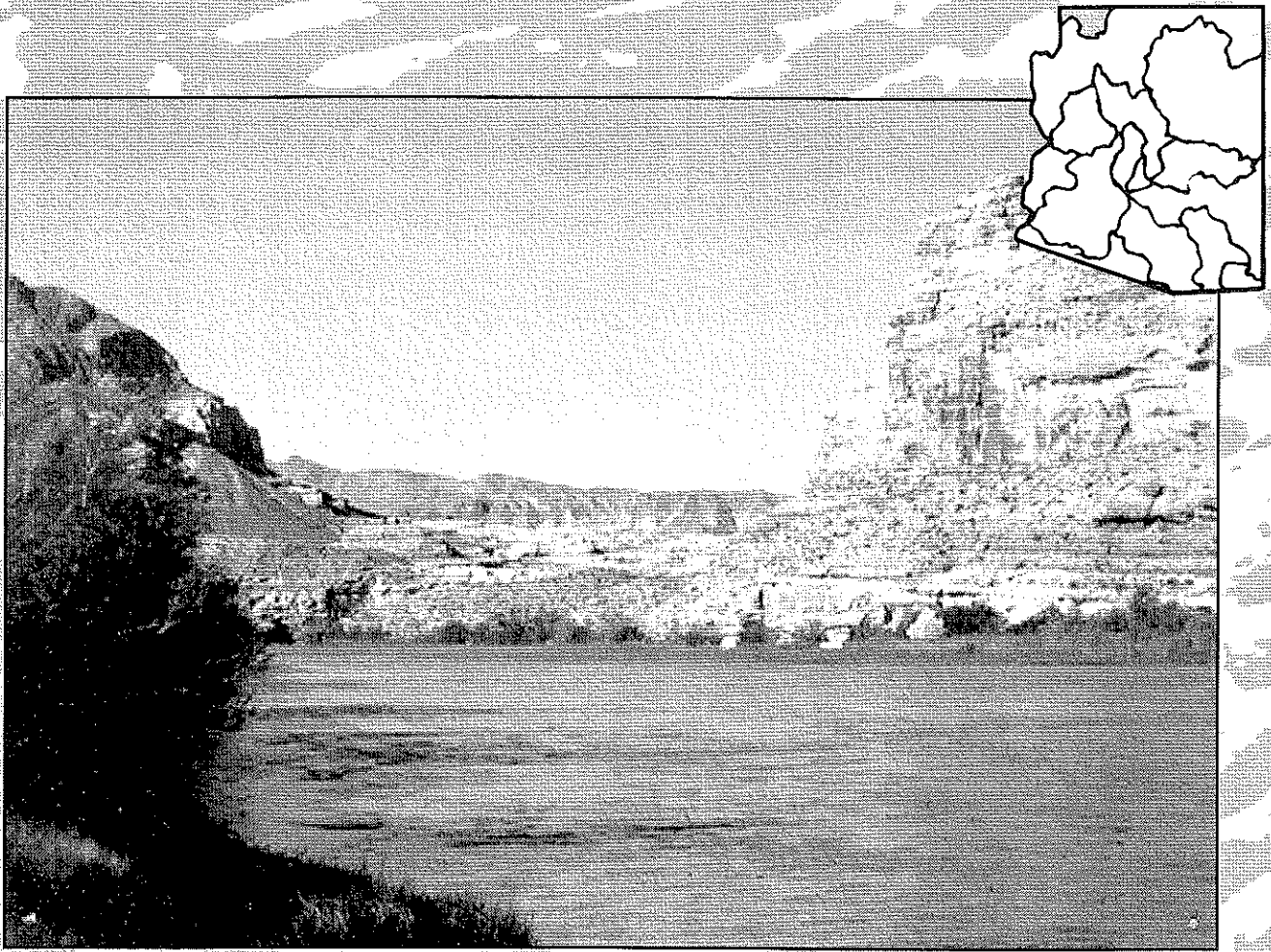
Ecological: The Bill Williams River is a precious resource for bighorn sheep, more than 100 species of birds, and numerous plant and fish species. The riparian vegetation has been reduced to less than half of its historical coverage. This riparian area is a vital life-line for many species, and it deserves protection.

OTHER CONSIDERATIONS

The main threat appears to be possible conflicts over water rights and over the amount of water released by the dam, currently 10 cubic feet per second or inflow, whichever is less. The Kingman Resource Area office of the BLM has filed for inflow water rights and the city of Scottsdale, which owns Planet Ranch, has also filed for water rights. Recognizing the importance of the riparian areas, the Havasu Regional office of the BLM has removed cattle, although there are some strays remaining. The University of Arizona Department of Geoscience has recommended establishment of the Banded Canyon Natural Landmark along the river.

The Bill Williams River's riparian areas are sorely in need of the protection that Wild and Scenic designation could provide. The river's water level, which riparian habitat depends upon, is gravely threatened by complex conflicts over water rights. Above Alamo Dam, water is used by a pair of nesting bald eagles and for recreation - even though the federal mandate for the dam is for flood control and not for recreation. Below the dam, the water is needed for over 1,500 acres of riparian habitat which is pivotal to the existence of 16 endangered, threatened and marginal species of birds, bighorn sheep, and lowland leopard frog. Designation would help toward development of in-stream flow criteria and provide special management protection for the river's uniquely rich habitat and beautiful scenery. This is a river in peril.

VIRGIN RIVER BASIN



VIRGIN RIVER (Photo: Jerry Van Gasse)

Virgin River

The Virgin River flows through three states, originating north and east of Zion National Park in the high mountains of southern Utah, flowing through the deep redrock canyons of the Colorado plateau, and further on down through the eastern Mojave desert before emptying into Lake Mead in Nevada. In Arizona, the river cuts through an area of extreme geologic faulting and folding, exposing numerous layers of the earth and providing spectacular scenery, particularly in the Virgin River Gorge. This is one of the few remaining wild tributaries of the Colorado River.

ARC RECOMMENDATIONS

35 Miles of river from Utah-Arizona state line to Arizona-Nevada state line as follows:

3 miles from the Utah-Arizona state line down to the first I-15 bridge: Wild

9 miles from I-15 bridge to the Virgin River Campground: Scenic

7 miles from campground to the Virgin River Gorge: Recreational

15 miles from Virgin River Gorge to Nevada state line: Scenic

Managing Agency: Bureau of Land Management

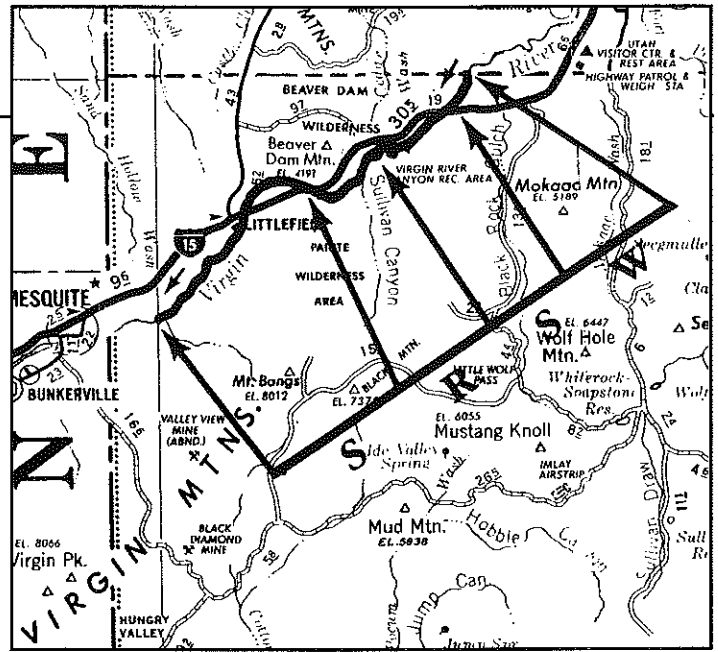
Private Land: Six river miles.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The river runs through a rugged canyon with walls from 300 to 500 feet high. This is a uniquely beautiful river where one can see Joshua trees from the banks. On the northern section, access is possible only by foot, horseback, or floating the river down from Utah.

Geologic: The Virgin River flows through a portion of the Hurricane Cliffs, which form the western edge of the Colorado Plateau. The relatively flat plateau lies to the east, while the Basin and Range Province with its fault-block mountains and alluvium-filled valleys is to the west. The river cuts a scenic gorge several hundred feet deep along the faulted and uplifted Virgin Mountains. Rocks in the canyon walls include the Pennsylvanian Callville Limestone and the Cambrian Tonto Group. The river is actively eroding its bed in this unstable environment, occasionally subject to earthquakes.

Fish and Wildlife: The Virgin River is home for roundfin minnow and Virgin roundtail chub, both federally listed as endangered, and the state listed Virgin spinedace. The river also provides habitat for peregrine falcon, California leaf-nosed bat, spotted bat and common black-hawk. The Virgin provides a unique riparian corridor through an otherwise arid region and is an important water source for a variety of wildlife, including the desert bighorn sheep.



Map 38 - Virgin River

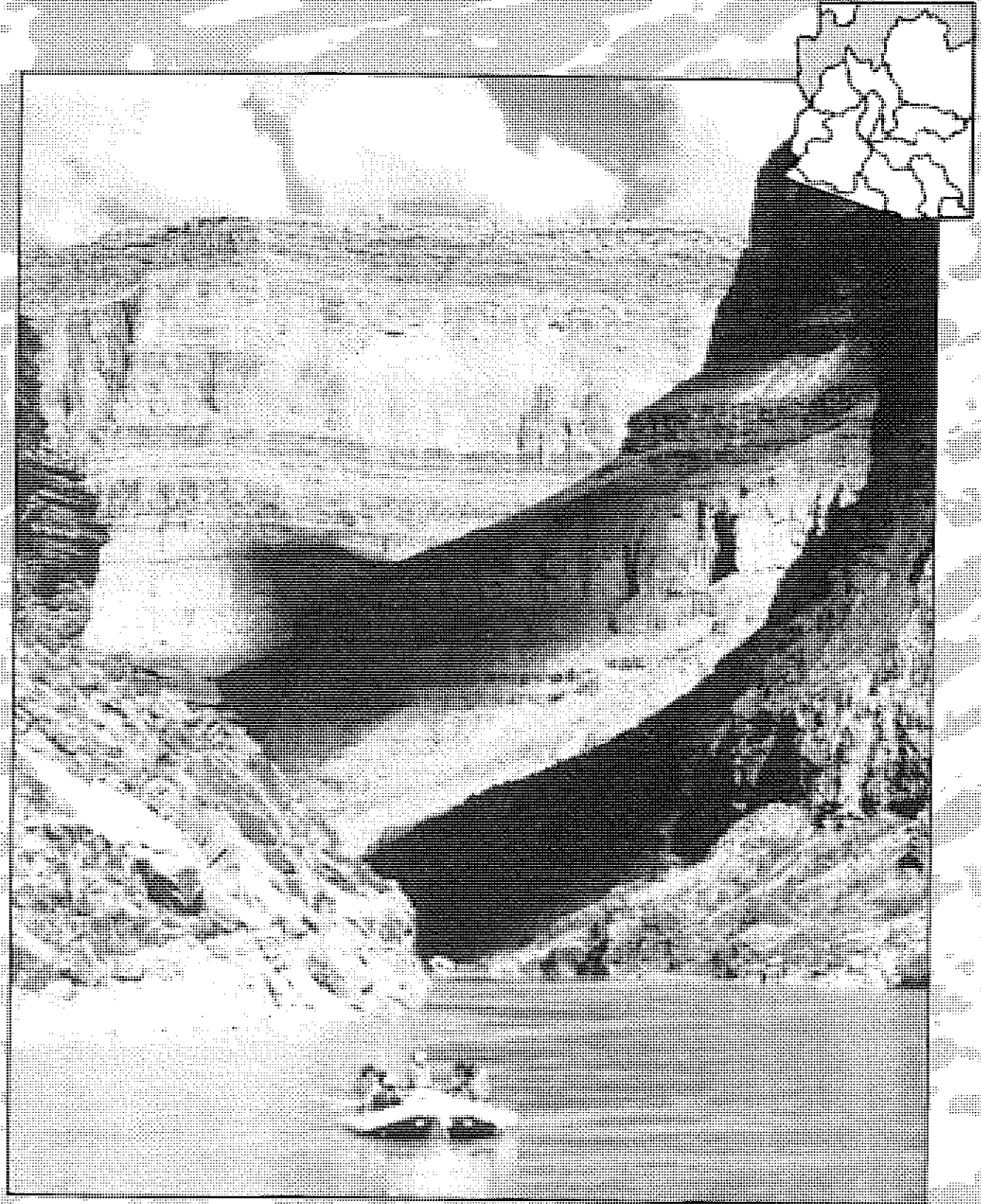
Ecological: This area is very important scientifically as the ancient headwaters of the Colorado River before the Grand Canyon was carved. The BLM is studying all 120 miles of the Virgin River to determine in-stream flow needs for fish and riparian values.

OTHER CONSIDERATIONS

The Virgin River was identified in the original National Rivers Inventory as having outstandingly remarkable scenic, geologic, and fish and wildlife values. The Arizona Strip BLM has found the scenic, geologic, aquatic, and riparian values of the river to be outstandingly remarkable and the entire river within Arizona as eligible for Wild & Scenic designation.

The BLM-Arizona Strip District has recommended study of the Virgin River for inclusion in the Wild and Scenic Rivers System. Nearby communities, through actual and proposed diversions, threaten the very existence of the Arizona segment of the Virgin River. As the lifeblood of the adjacent Beaver Dam Mountains and Paiute Wilderness Areas, and as the principal creative force of Zion National Park, the Virgin should retain its historical right to flow freely and not be denigrated to a dry-wash. Wild and Scenic River designation will help to ensure this right.

COLORADO RIVER BASIN



COLORADO RIVER, IN THE GRAND CANYON (Photo: Rob Elliot)

Kanab Creek

Kanab Creek flows southward into Arizona from Utah. It is a tributary to the Colorado River and forms a deeply cut canyon across the Arizona Strip into the Grand Canyon. It is one of the most beautiful and rugged canyons in Arizona and offers ideal habitat for peregrine falcons and desert bighorn sheep. Its aesthetic and ecological values are characterized by hanging gardens such as Shower Bath Spring, and by 1800 foot vertical walls formed in layers of paleozoic sediments unique to the Grand Canyon. Kanab Creek is an essential component of the Grand Canyon ecosystem. It provides riparian, desert, and forest habitats which are a contiguous and integral part of the interrelated flora and fauna of the Grand Canyon. Approximately 15 miles of lower Kanab Creek are in Grand Canyon National Park; 25 miles are within the Kaibab National Forest Kanab Creek Wilderness Area; and 40 miles are within the jurisdiction of the Bureau of Land Management.

ARC RECOMMENDATION

80 miles from southern boundary of Kaibab Paiute Indian Reservation to confluence with the Colorado River: Wild

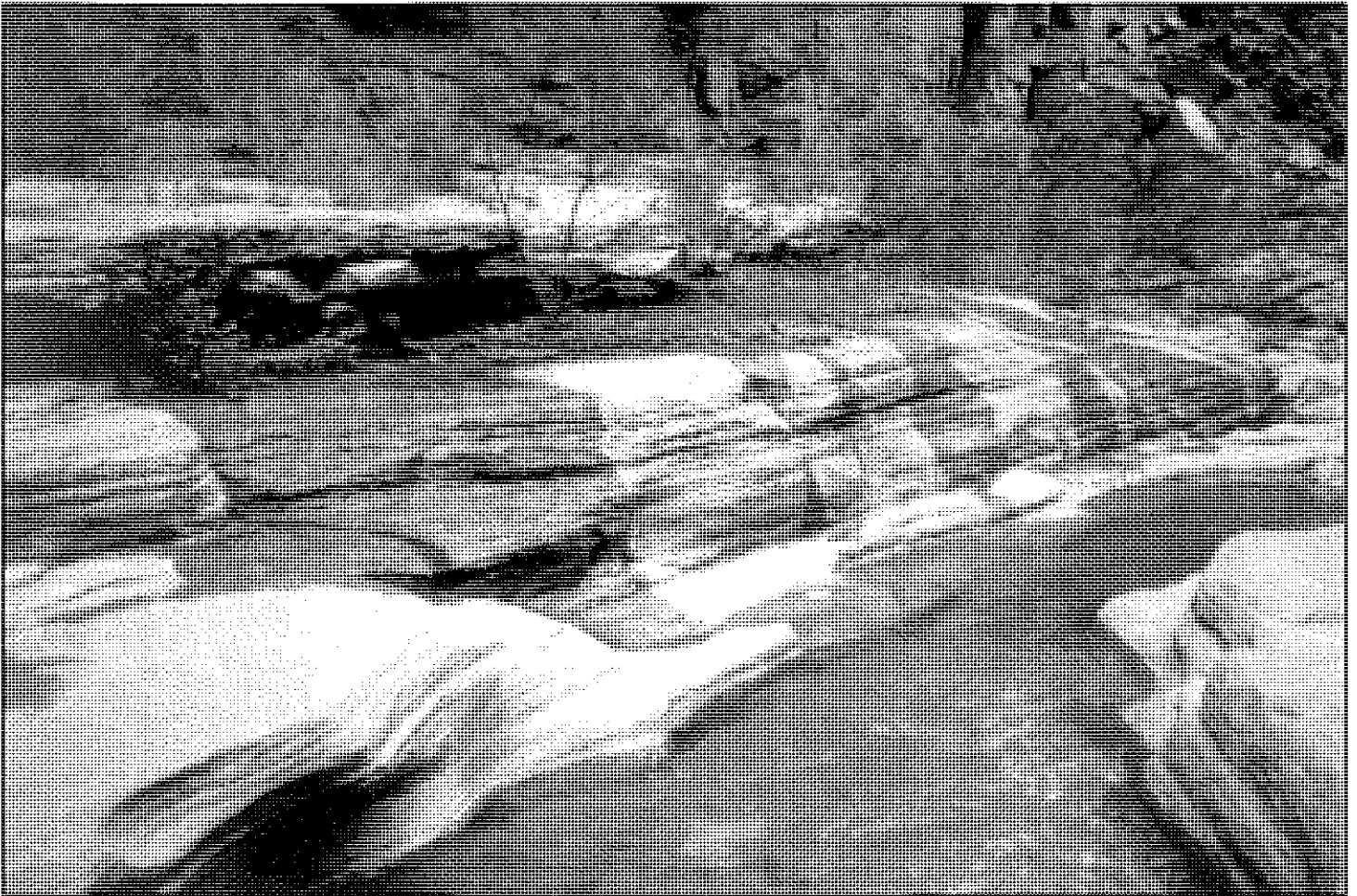
Managing Agencies: Bureau of Land Management, Arizona State Land Department, Kaibab National Forest, and National Park Service.

Private Land: 140 acre parcel near the confluence of Snake Gulch and Kanab Creek.

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Dramatic topography, multicolored sedimentary rocks, waterfalls, and verdant riparian vegetation contribute to Kanab Creek's extravaganza of scenic offerings. It is a photographer's paradise that is filled with many lifetimes of wonderment.

Recreation: Rugged backcountry hiking, camping, rock climbing, bird watching, and other related activities are available throughout the proposed segment of Kanab Creek. Perennial pools and springs are



KANAB CREEK (Photo: Paul Lowes)

scattered throughout the canyon in dry years and Kanab Creek flows year-round in wetter years. Flash flooding may be a significant danger to hikers during the late summer.

Geologic: Over a billion years of geologic history are exposed in the chasm of Kanab Creek. It offers fossils, faults, unconformities, and abundant examples of diverse depositional environments. The paleozoic section of the canyon is the same as that seen from the South Rim of the Grand Canyon encompassing the Kaibab through the Muav Limestones. When Kanab Creek floods, it carries sediments essential to maintaining beaches and riparian habitat along the Colorado River in the Grand Canyon.

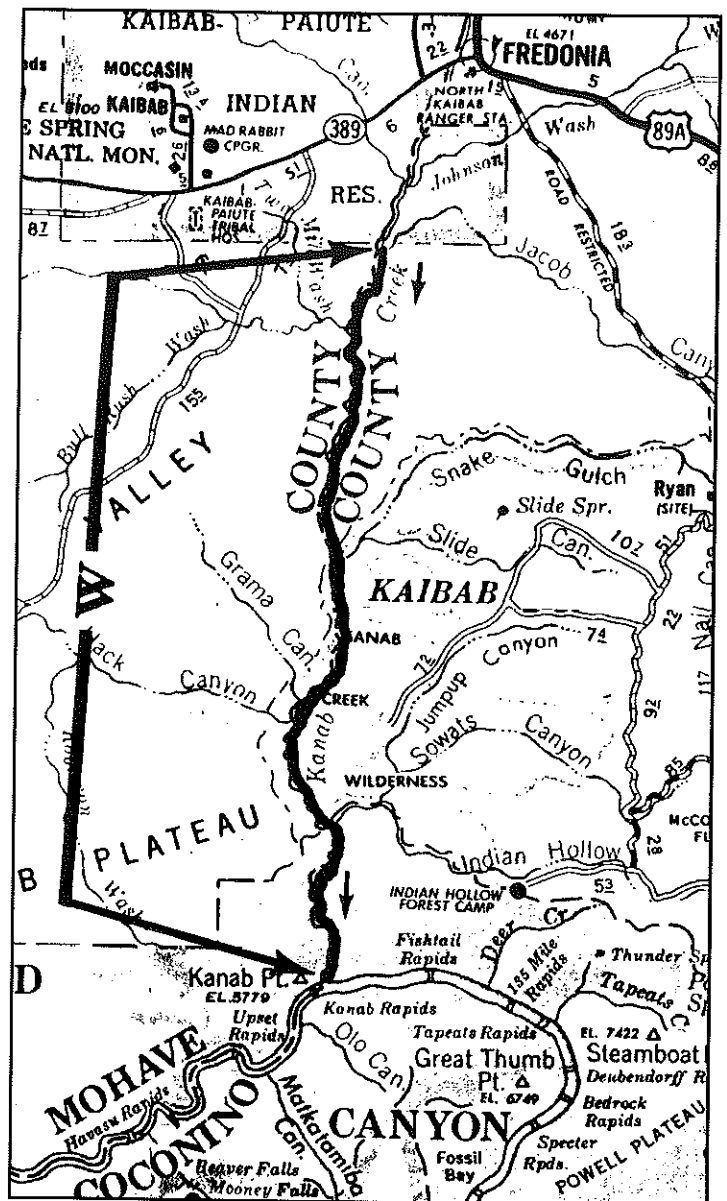
Fish and Wildlife: Near the Colorado River, native fish include the speckled dace, flannelmouth and bluehead suckers, and chub. Kanab Creek is important spawning habitat for native fish, and possibly, for rare individuals of the endangered humpback chub (source: GCES), while lower stretches provide a refuge for their larval development. Macroinvertebrates and amphibians such as the red-spotted toad are common in canyon pools. Diverse bird life include the plain titmouse, Lucy's warbler, yellow-breasted chat, and peregrine falcon. Mountain lion, ringtail cat, mule deer, and bighorn sheep inhabit the canyon. The continuity of the Kanab Creek ecosystem is important to this region.

Ecological: Riparian habitats in the upper canyon have been degraded by domestic livestock but are recovering under management revisions made by the Forest Service and BLM. Ponderosa pine and mixed-conifer forests occur in higher elevations and shaded north facing areas while pinyon-juniper communities and desert species dominate lower elevations and south-facing slopes. Native cottonwood, desert almond, willow, redbud, and single-leaf ash typify woody vegetation along the canyon bottom. Monkeyflower, columbine, ferns and diverse vegetative communities comprise a wide range of ecological niches common only to relatively undisturbed side canyons of the Grand Canyon. Because Kanab Creek is a tributary to the Colorado River, it provides a continuity of diverse ecological communities which remain unfragmented and intact for species that depend on seasonal movement between a variety of habitats.

Cultural: The area has had few surveys for prehistoric sites. However, examples of rock art and dwelling sites are abundant in the higher cliffs bordering the upper canyon layers. Havasupai, Hualapai, and other modern descendants of prehistoric people of the Grand Canyon regard the entire region as their sacred and spiritual homeland. John Wesley Powell used Kanab Creek to exit the Colorado River following his second river expedition of 1872.

OTHER CONSIDERATIONS

Inclusion in the Wild and Scenic River Act will help to provide a strong and consistent management plan for the entire length of Kanab Creek, which is necessary to protect the ecological integrity and continuity of this unique ecosystem. There are potential threats to the water quality from municipal waste-water, mining, illegal off-road vehicle use, and riparian degradation. It is important to protect this water as an important tributary to the Grand Canyon and its contribution of sediments to the lower canyon. While much of the Kanab Creek is protected by wilderness or the National Park Service, there are serious threats upstream, and the entire creek deserves to be included in the Wild and Scenic River Act as an exceptional resource.



Map 39 - Kanab Creek

Paria River (Lower Gorge and Buckskin Gulch)

Paria River is the primary drainage for the Paria Canyon, providing a unique riparian corridor through an otherwise arid region. Buckskin Gulch and the Paria are noted for their dramatic terrain. Their slot canyons have been carved out of sedimentary rocks to the depths of 2,500 feet producing a variety of spectacular geological features, such as massive sandstone walls decorated with huge streaks of multi-colored desert varnish. These canyons become spectacularly sheer in Buckskin Gulch, with narrows only a few feet wide and several hundred feet deep. The corridor is an important water source for a variety of wildlife, such as deer, bobcat and the desert bighorn sheep.

ARC RECOMMENDATION

35 miles of Paria from White House Trailhead in Utah to confluence with the Colorado River and 10 miles of Buckskin Gulch from Wire Pass to confluence with Paria: Wild

Managing Agencies: Bureau of Land Management and National Park Service.

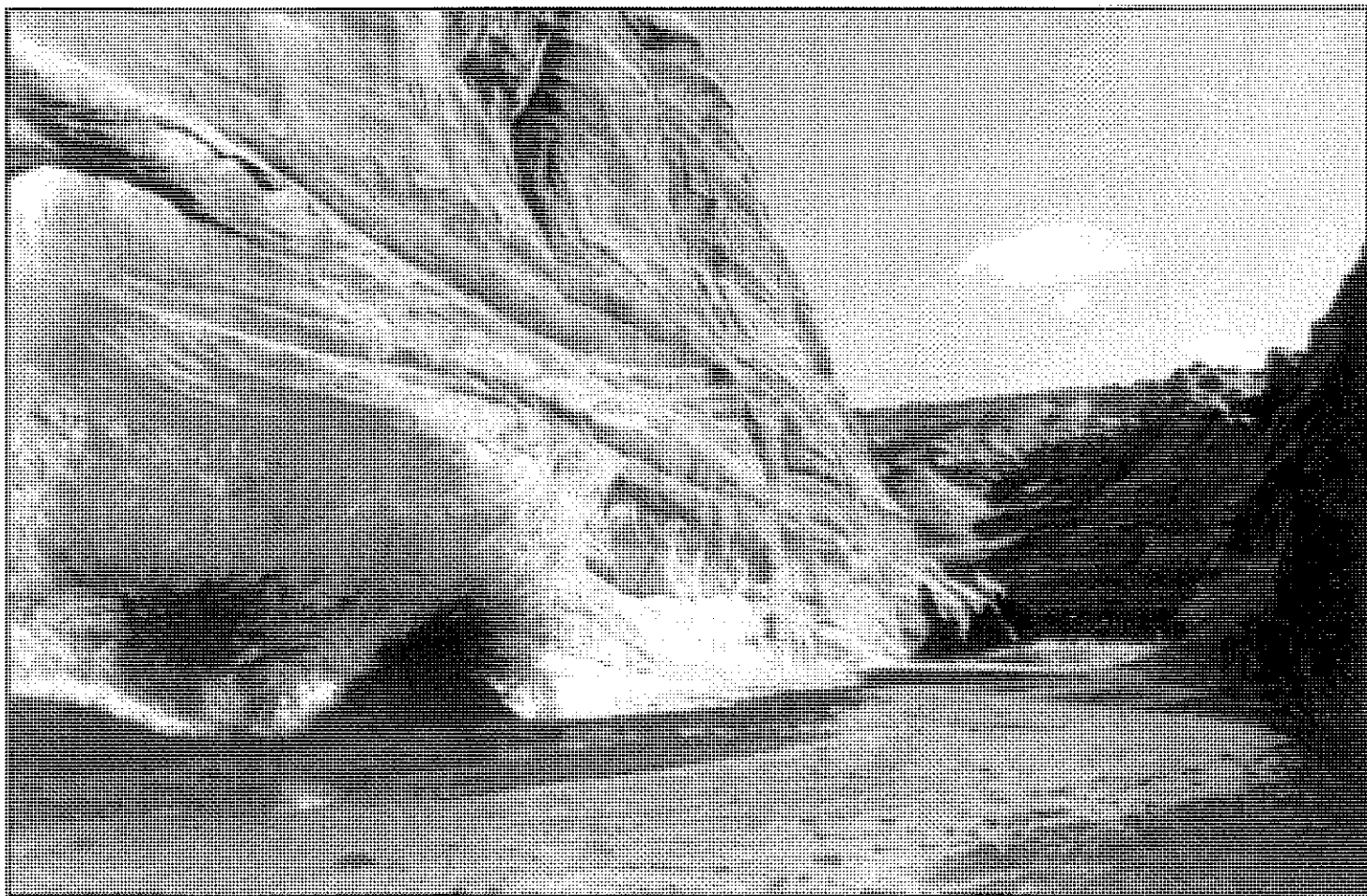
Private Land: None

OUTSTANDINGLY REMARKABLE VALUES

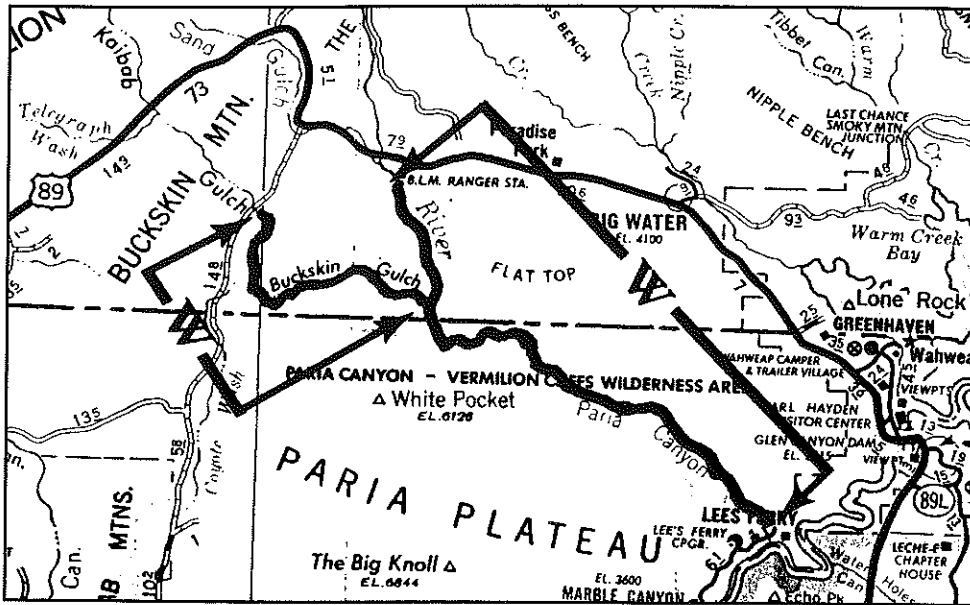
Scenic: The rivers cut through an area of significant geologic uplift and associated faulting exposes numerous layers of the earth's crust, providing dramatic scenery. There are riparian plants that make up magical hanging gardens and vegetated wall springs that add to the wonder. Other plant life includes the Roaring Springs poppy and striped flower milk vetch, both threatened species. Entering these canyons is like walking into a magical, unique world.

Recreation: Access is possible only on foot or horseback from four trailheads at the ends of the proposed segments. Paria River is heavily backpacked all year.

Geologic: The outstandingly remarkable geologic features of the Buckskin Gulch-Paria Canyon area have been documented in countless magazines and articles. There are amphitheaters by the dozen, meandering canyons, and incredible sandstone arches, such as slide



PARIA RIVER (Photo: Neal Berg)



Map 40 - Paria River

rock arch and the wondrous 200 foot span of Wrather Arch, one of the most incredible features in the Paria Canyon.

Fish and Wildlife: The river provides habitat for the speckled dace, bluehead sucker and flannel mouth sucker. Below the Narrows of the

Paria more riparian vegetation, such as willow, box elder and cottonwood, grow along the shorelines. This habitat is thought to attract several state and/or federal endangered birds such as the southwest willow flycatcher, the yellow billed cuckoo, and the peregrine falcon.

Cultural: The area is rich in remnants of both Native and Euro-american use. Remnants of habitation have been located and documented. Anasazi dwellings and petroglyphs, along with pump sites from early ranches are still evident.

OTHER CONSIDERATIONS

The Arizona Strip District of the Bureau of Land Management has found the Paria River in their district both eligible and suitable for Wild and Scenic River designation

for its "outstandingly remarkable scenic, recreational, geologic, fisheries and cultural values." They believe that "managing the Paria River as a Wild and Scenic River would go together well with managing for the protection, preservation and public use of wilderness values." We wholeheartedly agree!

Little Colorado River

This section of the Little Colorado River winds through the deeply cut and highly scenic Little Colorado River Gorge. The majority of the section is on the Navajo Indian Reservation, entering Grand Canyon National Park at the mouth. Manmade intrusions are negligible in the gorge area. The river runs intermittent with pools supporting fish down to Blue Springs, then runs perennial the final 13 miles to the confluence with the Colorado River.

ARC RECOMMENDATIONS

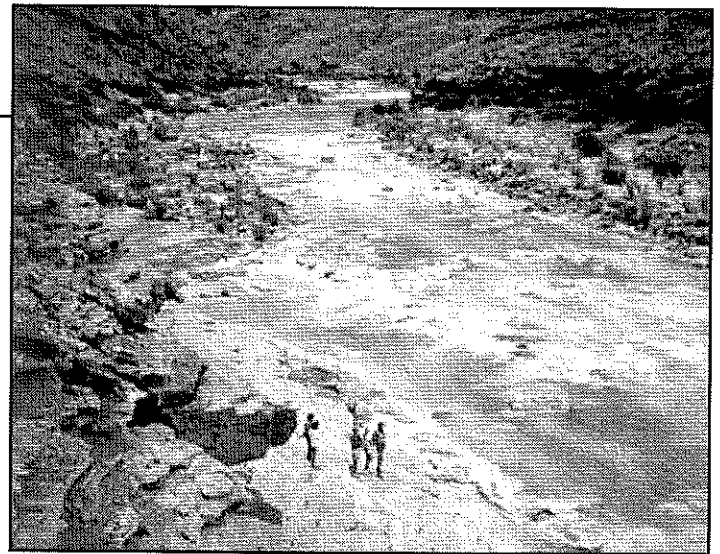
54 miles from Cameron to confluence with Colorado to be studied for wild designation upon approval and support from the Hopi and Navajo Nations.

Managing Agency: Grand Canyon National Park

Private Land: Navajo Indian Reservation and Hopi Tribal Lands

OUTSTANDINGLY REMARKABLE VALUES

Scenic: The river winds through a tortuous course through a precipitous canyon with rims nearly 3500 feet above the riverbed. The sheer walls of the canyon are in multi-colored layers. Near the mouth, the waters are charged with calcium carbonate, resulting in a striking azure

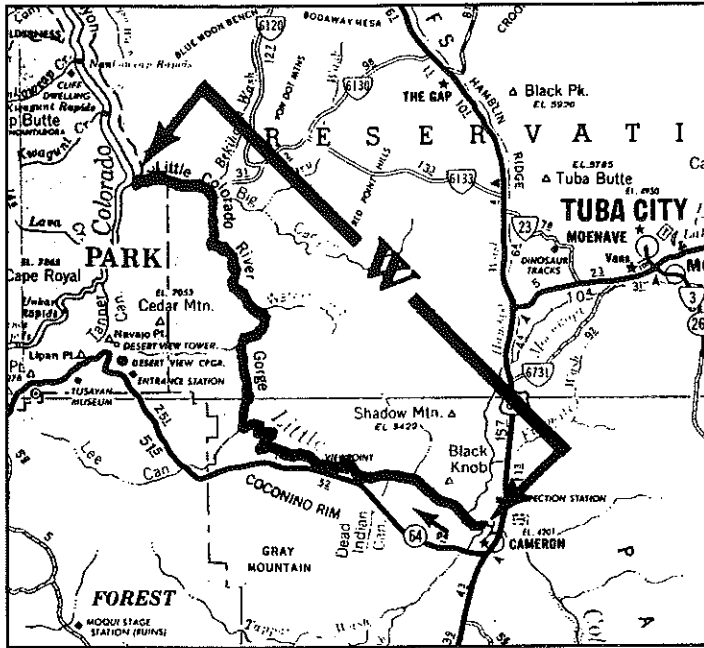


LITTLE COLORADO RIVER (Photo: Gail Peters)

blue color, and creating travertine terraces and dams.

Geologic: The Little Colorado River Gorge is bounded by extensive well exposed geologic formations, mainly of the Paleozoic age, with sheer canyon walls up to 3500 feet high. Blue Springs is one of the largest springs in the State.

Fish and Wildlife: The endangered humpback chub live, spawn and rear young in the lower nine miles of the river. This is the only confirmed breeding population of humpback chub in the Lower Colorado River Basin. Other native fishes include speckled dace, bluehead and flannelmouth sucker, and endangered razorback sucker.



Map 41 - Little Colorado River

Wildlife populations in the gorge area have not been well studied, but are known to include Hopi rattlesnake, ringtail cat, mountain lion, beaver, raccoon and golden eagle.

Cultural and Historic: A number of prehistoric ruins are located along the river course. Sipapu Spring is a spring sacred to the Hopi Indians located about five miles above the mouth. Religiously significant routes to salt springs and other places are of deep religious significance to American Indians. The Beamer Cabin, a rock-constructed miner's cabin located about one mile above the mouth, is of historic significance.

OTHER CONSIDERATIONS

The Little Colorado River Gorge was identified as a potential Natural Landmark in the Southern Colorado Plateau theme study conducted for the former Heritage Conservation and Recreation Service (HCERS). The Little Colorado River was also one of the only intermittent streams in the national HCERS Inventory.

Colorado River (Glen Canyon)

The Colorado River from Glen Canyon Dam to the Paria River offers outstanding recreational opportunities for flat-water rafting, boating, and fishing in a nationally renowned blue ribbon fishery for introduces trout. This stretch of the Colorado River includes the last few miles of the spectacular Glen Canyon, most of which is now flooded behind Glen Canyon Dam. Public access to this stretch of the Colorado River is provided at Lee's Ferry.

ARC RECOMMENDATION

16 miles from Glen Canyon Dam to the Paria River confluence:

Scenic

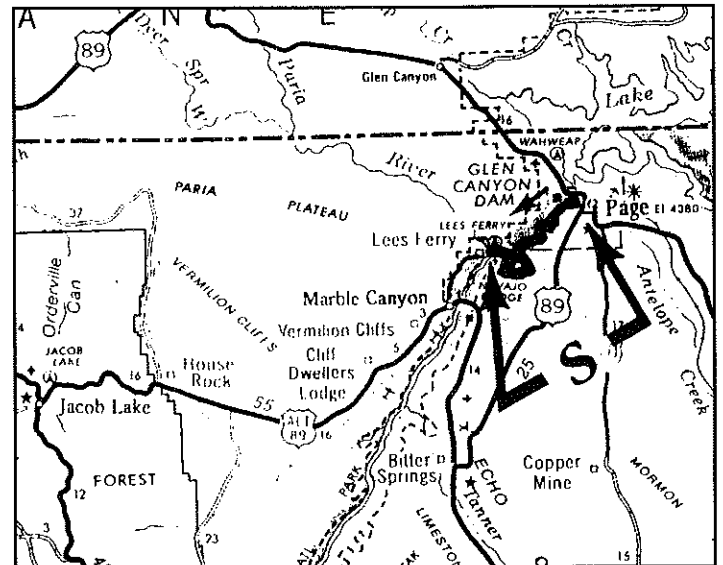
Managing Agency: National Park Service

Private Land: None

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Clear blue waters bordered by groves of tamarisk and willows are overshadowed by towering red sandstone cliffs. The scenery is dominated by stark topographical contrasts and a gentle, reflecting river. During summer cloudbursts countless waterfalls can suddenly appear, cascading down the sides of the canyon walls into the verdant riparian area lining the river.

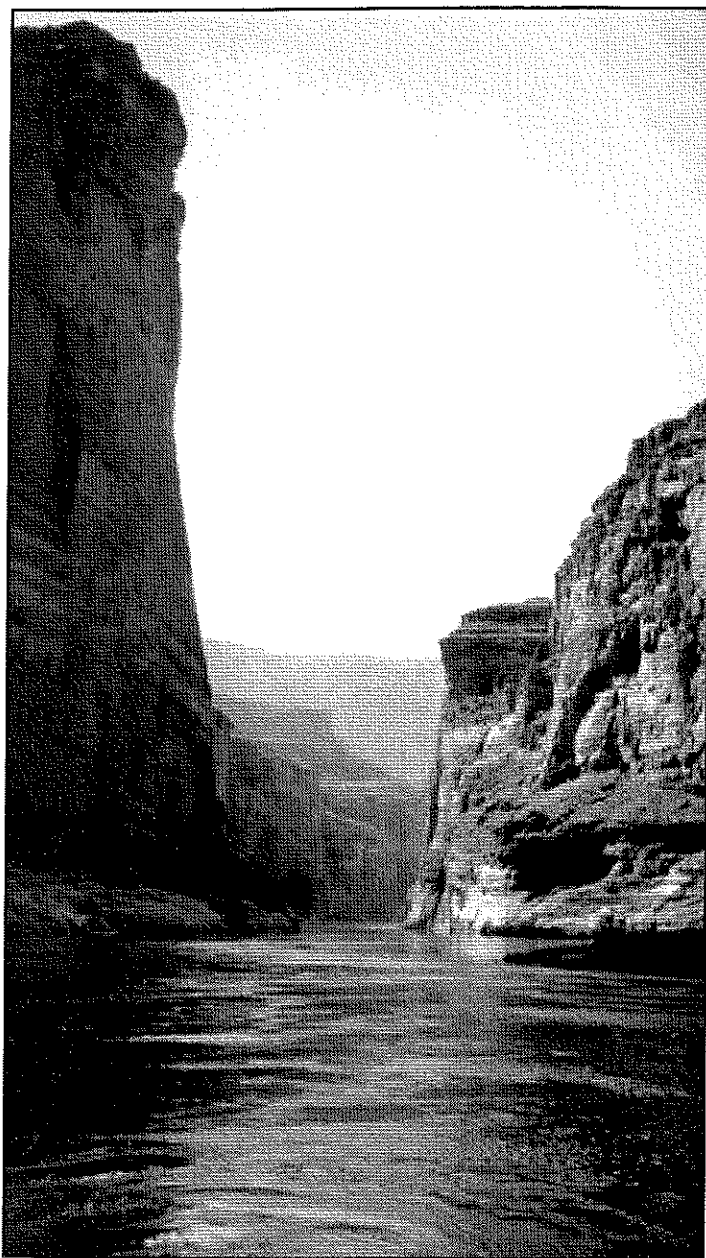
The Navajo sandstone defining this channel of the Colorado River is the only remaining segment of the more than 200 mile long Glen



Map 42 - Colorado River (Glen Canyon)

Canyon. The remainder is drowned beneath the waters of Lake Powell. The sandstone cliffs provide towering exposures, comprising vital habitat for birds and other animals.

Recreation: This stretch of the river is known internationally for its blue ribbon trout fishery, which is enjoyed year-round. One day float trips by raft from Glen Canyon Dam to Lee's Ferry provide additional access to the intricate beauty of the Colorado River canyon country. This stretch of the river is accessible to a large number of people who



GLEN CANYON (Photo: Gail Peters)

would otherwise not be able to enjoy the Colorado River. Several hiking trails, upstream boating, and campsites allow for additional use of the river corridor.

Geologic: The steep, sheer cliffs of Glen Canyon end at Lee's Ferry as the canyon opens up to the only natural crossing for 300 miles for both directions along the river. The exposed Navajo sandstone is the most impressive outcrop within the Colorado River plateau.

Fish and Wildlife: Endangered species which can be found here are the peregrine falcon, which nests in the area, and wintering southern bald eagle. The area is also within the home range of the desert bighorn sheep and an occasional golden eagle. The Paria River confluence area may also provide seasonal habitat for native fish. The area also supports one of the finest trout fisheries in the southwest, ducks and geese, and aquatic food items that are essential to the maintenance of healthy fish populations downstream. Riparian vegetation along the 16 mile river

corridor provides essential habitat for many avian species and refuge for small mammals. The riparian importance extends in its linkage with the area above Glen Canyon Dam and into the Grand Canyon.

Historic: The Lee's Ferry/Paria River confluence area includes two National Historic Districts commemorating early settlement of the area for farming and the establishment of a ferry crossing the Colorado River. The area also includes remnants of the Spencer Ferry boat which was built at Lee's Ferry in the 1800's; its remains are still found in the Colorado River. The Lee's Ferry site was also an important point during Major John Wesley Powell's two exploration trips through the Grand Canyon. The Major's groups were resupplied at Lee's Ferry prior to their long and perilous descents into the Grand Canyon.

Cultural: Numerous petroglyphs can be found on the canyon walls along this river stretch. Anasazi ruins are near the Paria River. Several firepits and other remnants of the early cultures have been found in the eroding sandbars below Glen Canyon Dam. The historical use of this area was extensive as the Anasazi utilized the river bottoms for the raising of crops and animals, and remnants of this record exist only here since the remainder of Glen Canyon itself is drowned by Lake Powell.

OTHER CONSIDERATIONS

The coldwater flows from Glen Canyon Dam have allowed establishment of a significant trout fishery, but at the same time have further endangered declining native fish species. Fluctuating flows to generate peaking power create unstable conditions which can strand fish or drown bird nests. These artificial flows, combined with the trapping of new sediments in Lake Powell, cause continual erosion of the beaches. Flow fluctuations have also proven dangerous for recreationists on the water or near the shores. As part of the development of alternatives for its Glen Canyon Dam Environmental Impact Statement, the Bureau of Reclamation considered as one alternative a re-regulation dam just upstream of Lee's Ferry which would inundate this entire stretch of river. That dam has been dropped from consideration at this time, but other alternatives may influence the proposed reach as well.

In contrast to the raging whitewater of the Colorado River below this point, the Glen Canyon reach offers an easily accessible flat water alternative for those seeking a top-quality river canyon experience. The last remaining section of Glen Canyon is every bit as spectacular and worthy of protection for its recreational and environmental values as the Grand Canyon downstream. The possibility of further modification in this area demands that Wild & Scenic River designation be enacted now to permanently protect this extraordinary area.

Colorado River (Grand Canyon)

The Colorado River through the Grand Canyon is distinguished by its scenic splendor, the diversity of its flora and fauna, its magnitude and isolation. The river today is a wild river temporarily harnessed by man at Glen Canyon Dam but always striving to break free, with every tributary reviving the natural state of the river. Significant adverse impacts exist through the operations of Glen Canyon Dam; there are also impending threats to water quality, and the complexity of sometimes competing legal mandates has resulted in inadequate protection for environmental, recreational and cultural values.

ARC RECOMMENDATIONS

237 miles of the Colorado River through the Grand Canyon: Wild

35 miles of tributaries as follows:

Nankoweap Creek - 3.9 miles; Kwagunt Creek - 3.2 miles; Chuar Creek - 3.7 miles; Clear Creek - 4.4 miles; Hermit Creek - 1.5 miles; Boucher Creek - 1.5 miles; Crystal Creek - 4.5 miles; Shinumo Creek - 2.5 miles; Stone Creek - 1.5 miles; Tapeats Creek/Thunder River - 2.8 miles; Deer Creek - 1.3 miles; and Havasu Creek - 3.3 miles within Grand Canyon National Park: Wild.

Managing Agency: National Park Service

Private Land: None

OUTSTANDINGLY REMARKABLE VALUES

Scenic: Words fall short in attempting to describe the awesome majesty of the Grand Canyon. Viewing the canyon while floating down the Colorado River is a particularly special way to see its many moods - absorbing the ever changing scene as each bend of the river, cloud shadow, and changing angle of light reveals a different form, hue and texture. The many, intimate hiking opportunities up pristine tributaries provide a dramatic contrast to the grandeur of the main canyon itself.

Recreation: The Colorado River within the Grand Canyon is one of the world's premier white water rafting rivers, offering the longest stretch of recreational whitewater in the world. The river falls 1,900 feet between Lees Ferry and Lake Mead; half of this drop takes place in more than 160 rapids, which make up only 9% on the distance.

Geologic: The Grand Canyon offers a beautifully layered record covering nearly 2 billion years of geologic time. It is one of the most complete records of geologic history exposed anywhere in the world.

Fish and Wildlife: The Colorado River cliffs are home to bands of desert bighorn sheep, as well as the endangered peregrine falcon and other raptors. Large numbers of bald eagles have begun to forage in Nankoweap Creek in winter due to the availability of spawning trout. The Grand Canyon has been designated as a proposed location for reintroduction of the endangered California condor. All of the raptor species utilize a large home range, and consequently many forage over

an expanse of the Colorado River corridor through the Grand Canyon.

The humpback chub has been listed as a federally endangered species since 1973, and lives in the mainstem Colorado River. The species has been forced into a smaller environment and today is focused in the vicinity of the confluence of the Little Colorado River.

The humpback chub population in the Grand Canyon is the most important of remaining populations in the Colorado River basin, due to its physical isolation in the Grand Canyon and its genetic integrity. Another fish native to the Colorado River, the razorback sucker is also federally listed as an endangered species.

Ecological: Within Grand Canyon National Park, the river passes through three of North America's four deserts: Great Basin, Sonoran and Mojave. The riparian zone that exists along the Colorado River Corridor represents the longest stretch of uninterrupted riparian vegetation in the southwest. The importance of having an intact riparian ecosystem is underscored through the preservation of (1) continuity of important vegetation species, (2) avian corridors for migration, (3) the maintenance of ecological integrity, and (4) as an intact natural laboratory for studying the diversity of life and its processes.

Cultural: The Colorado River corridor in the Grand Canyon has been home to as many as six American Indian cultures over the last 10,000 years, including the Hopi who are presumably the direct descendants of the Anasazi. These peoples used the Colorado River corridor in Grand Canyon for several reasons: survival, growing crops, religious ceremony, transportation (as a migration route), protection and cultural exchange.

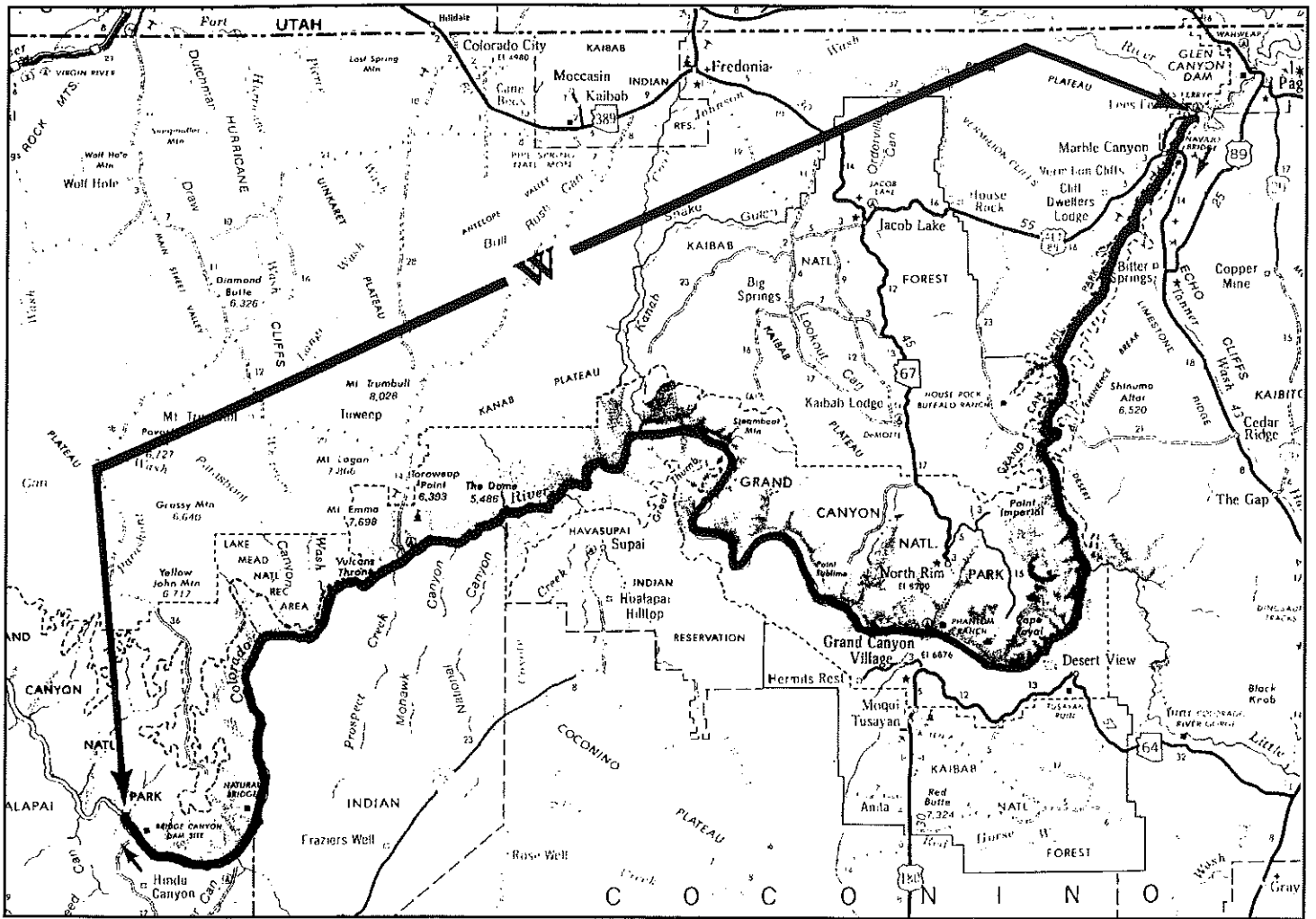
Tributary Steams: To complement the Colorado River itself, there are numerous tributaries entering the Colorado River within Grand Canyon, all of which are free-flowing. These tributaries maintain unique riparian communities and aquatic ecological values, differing in their character, flood frequencies and magnitude, appearance and elevation. The tributaries are often the location of increased ecological activity due to their diversity and location. Adequately protected, they provide a pristine scientific baseline against which to compare ecosystems more compromised by man's influence.

These tributaries include the following:

Havasupai Creek is renowned for its blue-green waters cascading over numerous travertine falls and through quiet pools. Velvet ash and Arizona ash, tree species uncommon elsewhere in the canyon, thrive throughout the Havasupai riparian zone. The lower section of Havasupai Creek, from Beaver Falls to the confluence with the Colorado River, is within the park. Havasupai and Mooney falls are upstream from Beaver Falls and are on the Havasupai Indian Reservation. The Havasupai Indians have expressed an interest in Wild and Scenic River designation from Money Falls to the Colorado River.

Deer Creek is best known for its highly visible waterfall at the confluence with the Colorado River. However, its numerous pools are also a recreational attraction and are ecologically important.

Tapeats Creek is dependent of groundwater from the Kaibab Plateau for its flow, being spring-fed and emerging within the park at the stunning Thunder Falls, one of the better known waterfalls within Grand



Map 43 - Colorado River, Grand Canyon

Canyon.

Shinumo Creek is one of the few creeks within the park retaining its native fishery without the influence of trout and other aquatic non-natives entering from the mainstream. This is due to the barrier influence of a waterfall near the mouth. The lower reach of Shinumo Creek, from the waterfall to the confluence with the Colorado is an important refuge for native fishes during the spawning season.

Nankoweap, Chuar and Kwagunt Creeks cross younger Precambrian rocks, exposed by the Butte Fault, and are unique to the park. Nankoweap Creek has become an important winter spawning area for trout, which in turn supports the endangered Southern bald eagles who winter in Grand Canyon.

Stone Creek consists of a series of waterfalls, including one of the most spectacular in Grand Canyon. Unique communities of aquatic plants and invertebrates exist in Stone Creek.

Hermit, Crystal, Clear and Boucher Creeks are free-flowing streams emanating from the Vishnu Schist and other, older Precambrian rocks. These creeks have created a series of waterfalls, pools and habitat for a variety of native aquatic vertebrates and invertebrates. These creeks are used extensively by hikers and are unique ecosystems for mammals and birds.

The Paria River, Little Colorado River and Kanab Creek are extremely important tributary streams to the Colorado River, especial-

ly as the only natural sources of sediments remaining. Given the unique value of these three tributaries they are presented separately as a part of this proposal.

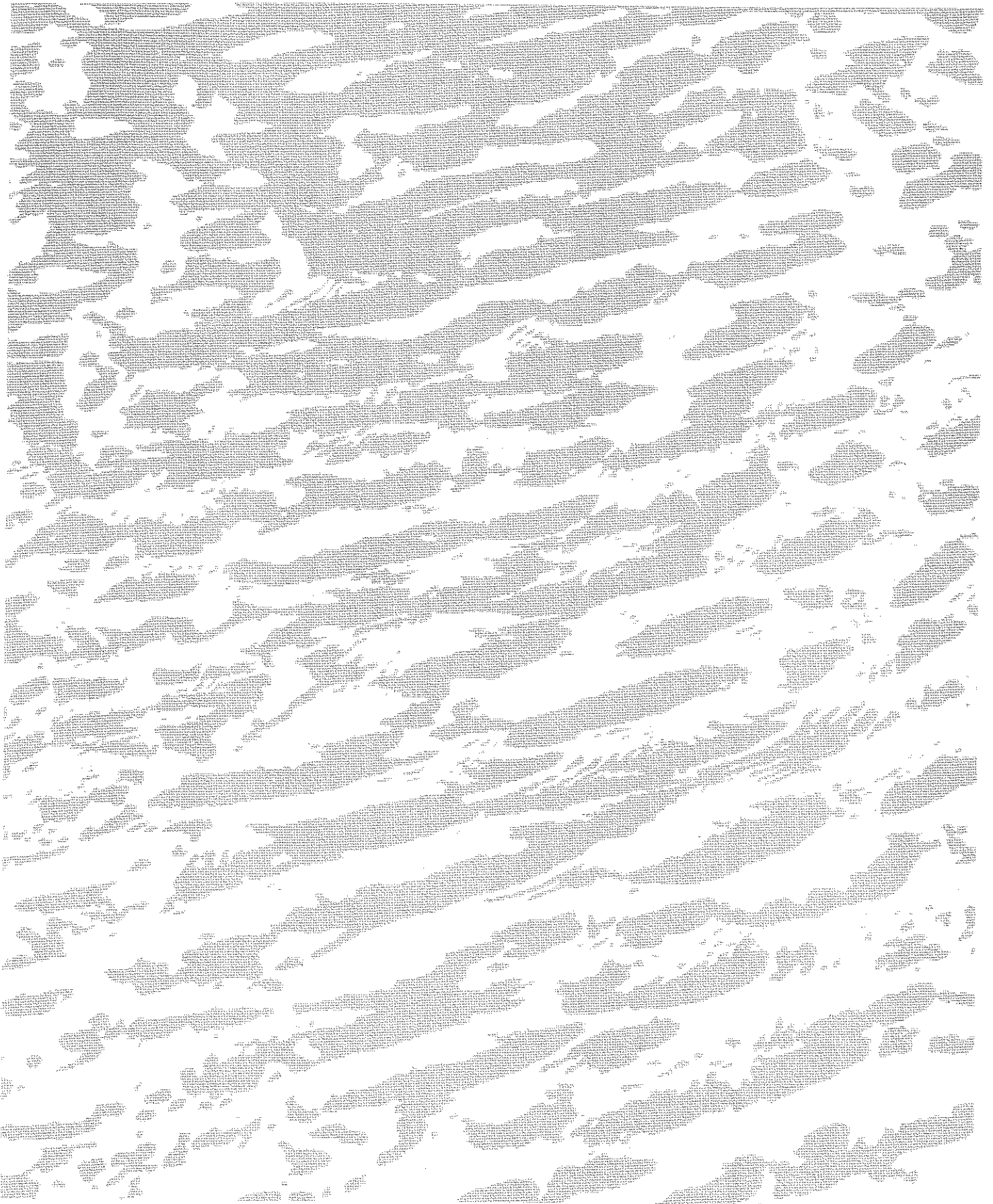
OTHER CONSIDERATIONS

The threats that exist to the Colorado River through Grand Canyon are too numerous to give in great detail in this proposal. The documented and continuing loss of sediments is especially critical. Sediment is the linkage that ties the terrestrial and aquatic habitats important to the entire ecosystem of the Grand Canyon.

Water quality of the river is also being impacted by a variety of sources and threats. The most immediate impacts are those related to dam operations and the development of uranium resources within the tributary drainage basins. Other external threats which exist to Colorado River quality have been identified, and in some cases, are already impacting the water resources of the tributary streams.

Passage of the Grand Canyon Protection Act in 1992 provides protection of the mainstem Colorado River through Grand Canyon from the historic, damaging, fluctuations caused by the operations of Glen Canyon Dam. However, if there is a preeminent, outstandingly remarkable, wild and scenic river in all of America, clearly it would be the Colorado River through the Grand Canyon.

APPENDIX



Appendix 1

TEXT OF THE WILD AND SCENIC RIVERS ACT (P.L. 90-542)

The following text of the Wild and Scenic Rivers Act is as the Act appears without the names of rivers designated or being studied. This version was edited and produced by Ronald Stork who is on the conservation staff of Friends of the River in Sacramento, California and to whom we are grateful for permission to reprint his work here.

WILD AND SCENIC RIVERS ACT¹

An Act To provide a National Wild and Scenic Rivers System, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) this Act may be cited as the "Wild and Scenic Rivers Act."

(b) It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations. The Congress declares that the established national policy of dam and other construction at appropriate sections of the rivers of the United States needs to be complemented by a policy that would preserve other selected rivers or sections thereof in their free-flowing condition to protect the water quality of such rivers and to fulfill other vital national conservation purposes.

(c) The purpose of this Act is to implement this policy by instituting a national wild and scenic river system, by designating the initial components with that system and by prescribing the methods by which and standards according to which additional components may be added to the system from time to time.

SEC. 2 (a) The national wild and scenic rivers system shall comprise rivers (i) that are authorized for inclusion therein by Act of Congress, or (ii) that are designated as wild, scenic or recreational rivers by or pursuant to an act of the legislature of the State or States through which they flow, that are to be permanently administered as wild, scenic or recreational rivers by an agency or political subdivision of the State or States concerned, that are found by the Secretary of the Interior, upon application of the Governor of the State or the Governors of the States concerned, or a person or persons thereunto duly appointed by him or them, to meet the criteria supplementary thereto as he may prescribe, and that are approved by him for inclusion in the system.... Upon receipt of an application under clause (ii) of this subsection, the Secretary shall notify the Federal Energy Regulatory Commission and publish such application in the Federal Register. Each river designated under clause (ii) shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands. For purposes of the preceding sentence, amounts

made available to any State or political subdivision under the Land and Water Conservation Act of 1965 or any other provision of law shall not be treated as an expense to the United States. Nothing in this subsection shall be construed to provide for the transfer to, or administration by, a State or local authority of any federally owned lands which are within the boundaries of any river included within the system under clause (ii).

(b) A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in section 1, subsection (b) of this Act. Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system and, if included, shall be classified, designated, administered as one of the following:

(1) Wild river areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

(2) Scenic river areas - Those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

(3) Recreational river areas - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

SEC. 3 (a) The following rivers and the land adjacent thereto are hereby designated as components of the national wild and scenic rivers system:

(Designation language for individual W&S rivers)

(b) The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall, within one year from the date of designation of such component under subsection (a) (except where a different date is provided in subsection (a)) establish detailed boundaries therefor (which boundaries shall include an average of not more than 320 acres of land per mile measured from the ordinary high water mark on both sides of the river); and determine which of the classes outlined in section 2, subsection (b), of this Act best fit the river or its various segments.

Notice of the availability of the boundaries and classification,

¹The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287) consists of Public Law 90-542 (October 2, 1968) as amended. P.L. 99-590 and P.L. 100-534 were the last bills that added generic amendments to the Act.

and of subsequent boundary amendments shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives.

(c) Maps of all boundaries and descriptions of the classifications of designated river segments, and subsequent boundary amendments to such boundaries, shall be available for public inspection in the offices of the administering agency in the District of Columbia and in locations convenient to the designated river.

(d) For rivers designated on or after January 1, 1986, the Federal agency charged with the administration of each component on the National Wild and Scenic Rivers System shall prepare a comprehensive management plan for such river segment to provide for the protection of the river values. The plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act. The plan shall be coordinated with and may be incorporated into resource management planning for affected adjacent Federal lands. The plan shall be prepared, after consultation with State and local governments and the interested public within three full fiscal years after the date of designation. Notice of the completion and availability of such plans shall be published in the Federal Register.

(2) For rivers designated before January 1, 1986, all boundaries, classifications, and plans shall be reviewed for conformity within the requirements of this subsection within 10 years through regular agency planning processes.

SEC. 4 (a) The Secretary of the Interior or, where national forest lands are involved, the Secretary of Agriculture, or, in appropriate cases, the two Secretaries jointly shall study and submit to the President reports on the suitability or unsuitability for addition to the national wild and scenic rivers system of rivers which are designated herein or hereafter by the Congress as potential additions to such system. The President shall report to the Congress his recommendations and proposals with respect to the designation of each such river or section thereof under this Act.... In conducting these studies the Secretary of the Interior and the Secretary of Agriculture shall give priority to those rivers (i) with respect to which there is the greatest likelihood of developments which, if undertaken, would render the rivers unsuitable for inclusion in the national wild and scenic rivers system, and (ii) which possess the greatest proportion of private land within their areas. Every such study and plan shall be coordinated with any water resources planning involving the same river which is being conducted pursuant to the Water Resources Planning Act (79 Stat. 244; 42 U.S.C. 1962 et seq.).

Each report, including maps and illustrations, shall show among other things the area included within the report; the characteristics which do or do not make the area a worthy addition to the system; the current status of land ownership and use in the area; the reasonably foreseeable potential uses of the land and water which would be enhanced, foreclosed, or curtailed if the area were included in the national wild and scenic rivers system; the Federal agency (which in the case of a river which is wholly or substantially within a national forest, shall be the Department of Agriculture) by which it is proposed the area, should it be added to the system, be administered; the extent to which the costs thereof, be shared by State and local agencies; and the estimated cost to the United States of acquiring nec-

essary land and interests in land and of administering the area, should it be added to the system. Each such report shall be printed as a Senate or House document.

(b) Before submitting any such report to the President and the Congress, copies of the proposed report shall, unless it was prepared jointly by the Secretary of the Interior and the Secretary of Agriculture, be submitted by the Secretary of the Interior to the Secretary of Agriculture or by the Secretary of Agriculture to the Secretary of the Interior, as the case maybe, and to the Secretary of the Army, the Chairman of the Federal Power Commission, the head of any other affected Federal department or agency and, unless the lands proposed to be included in the area are already owned by the United States or have already been authorized for acquisition by Act of Congress, the Governor of the State or States in which they are located or an officer designated by the Governor to receive the same. Any recommendations or comments on the proposal which the said officials furnish the Secretary or Secretaries who prepared the report within ninety days of the date on which the report is submitted to them, together with the Secretary's or Secretaries' comments thereon, shall be included with the transmittal to the President and the Congress.

(c) Before approving or disapproving for inclusion in the national wild and scenic rivers system any river designated as a wild, scenic or recreational river by or pursuant to an act of a State legislature, the Secretary of the Interior shall submit the proposal to the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Federal Power Commission, and the head of any other affected Federal department or agency and shall evaluate and give due weight to any recommendations or comments which the said officials furnish him within ninety days of the date of which it is submitted to them. If he approves the proposed inclusion, he shall publish notice thereof in the Federal Register.

(d) The boundaries of any river proposed in section 5 (a) of this Act for potential addition to the National Wild and Scenic Rivers System shall generally comprise that area measured within one-quarter mile from the ordinary highwater mark on each side of the river. In the case of any designated river, prior to publication of boundaries pursuant to section 3(b) of this Act, the boundaries also shall comprise the same area. This subsection shall not be construed to limit the possible scope of the study report to address areas which may lie more than one-quarter mile from the ordinary high water mark on each side of the river.

SEC. 5. (a) The following rivers are hereby designated for potential addition to the national wild and scenic river system:

(designation language for individual W&S study rivers)

(b)(4) For the purposes of conducting the studies of rivers named in subsection (a) there are authorized to be appropriated such sums as necessary.

(c) The study of any of said rivers shall be pursued in as close cooperation with appropriate agencies of the affected State and its political subdivisions as possible, shall be carried on jointly with such agencies if request for such joint study is made by the State, and shall include a determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the national wild and scenic rivers system.

(d) In all planning for the use and development of water and

and of subsequent boundary amendments shall be published in the Federal Register and shall not become effective until ninety days after they have been forwarded to the President of the Senate and the Speaker of the House of Representatives.

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(d) For rivers designated on or after January 1, 1986, the Federal agency charged with the administration of each component on the National Wild and Scenic Rivers System shall prepare a comprehensive management plan for such river segment to provide for the protection of the river values. The plan shall address resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act. The plan shall be coordinated with and may be incorporated into resource management planning for affected adjacent Federal lands. The plan shall be prepared, after consultation with State and local governments and the interested public within three full fiscal years after the date of designation. Notice of the completion and availability of such plans shall be published in the Federal Register.

(2) For rivers designated before January 1, 1986, all boundaries, classifications, and plans shall be reviewed for conformity within the requirements of this subsection within 10 years through regular agency planning processes.

SEC. 4 (a) The Secretary of the Interior or, where national forest lands are involved, the Secretary of Agriculture, or, in appropriate cases, the two Secretaries jointly shall study and submit to the President reports on the suitability or unsuitability for addition to the national wild and scenic rivers system of rivers which are designated herein or hereafter by the Congress as potential additions to such system. The President shall report to the Congress his recommendations and proposals with respect to the designation of each such river or section thereof under this Act.... In conducting these studies the Secretary of the Interior and the Secretary of Agriculture shall give priority to those rivers (i) with respect to which there is the greatest likelihood of developments which, if undertaken, would render the rivers unsuitable for inclusion in the national wild and scenic rivers system, and (ii) which possess the greatest proportion of private land within their areas. Every such study and plan shall be coordinated with any water resources planning involving the same river which is being conducted pursuant to the Water Resources Planning Act (79 Stat. 244; 42 U.S.C. 1962 et seq.).

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(c) Before approving or disapproving for inclusion in the national wild and scenic rivers system any river designated as a wild, scenic or recreational river by or pursuant to an act of a State legislature, the Secretary of the Interior shall submit the proposal to the Secretary of Agriculture, the Secretary of the Army, the Chairman of the Federal Power Commission, and the head of any other affected Federal department or agency and shall evaluate and give due weight to any recommendations or comments which the said officials furnish him within ninety days of the date of which it is submitted to them. If he approves the proposed inclusion, he shall publish notice thereof in the Federal Register.

(d) The boundaries of any river proposed in section 4 (a) of this Act for potential addition to the National Wild and Scenic Rivers System shall generally comprise that area measured within one-quarter mile from the ordinary highwater mark on each side of the river. In the case of any designated river, prior to publication of boundaries pursuant to section 3(b) of this Act, the boundaries also shall comprise the same area. This subsection shall not be construed to limit the possible scope of the study report to address areas which may lie more than one-quarter mile from the ordinary high water mark on each side of the river.

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(c) The study of any of said rivers shall be pursued in as close cooperation with appropriate agencies of the affected State and its political subdivisions as possible, shall be carried on jointly with such agencies if request for such joint study is made by the State, and shall include a determination of the degree to which the State or its political subdivisions might participate in the preservation and administration of the river should it be proposed for inclusion in the national wild and scenic rivers system.

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(c) The purpose of this Act is to implement this policy by instituting a national wild and scenic river system, by designating the initial components with that system and by prescribing the methods by which and standards according to which additional components may be added to the system from time to time.

SEC. 2 (a) The national wild and scenic rivers system shall comprise rivers (i) that are authorized for inclusion therein by Act of Congress, or (ii) that are designated as wild, scenic or recreational rivers by or pursuant to an act of the legislature of the State or States through which they flow, that are to be permanently administered as wild, scenic or recreational rivers by an agency or political subdivision of the State or States concerned, that are found by the Secretary of the Interior, upon application of the Governor of the State or the Governors of the States concerned, or a person or persons thereunto duly appointed by him or them, to meet the criteria supplementary thereto as he may prescribe, and that are approved by him for inclusion in the system.... Upon receipt of an application under clause (ii) of this subsection, the Secretary shall notify the Federal Energy Regulatory Commission and publish such application in the Federal Register. Each river designated under clause (ii) shall be administered by the State or political subdivision thereof without expense to the United States other than for administration and management of federally owned lands. For purposes of the preceding sentence, amounts

made available to any State or political subdivision under the Land and Water Conservation Act of 1965 or any other provision of law shall not be treated as an expense to the United States. Nothing in this subsection shall be construed to provide for the transfer to, or administration by, a State or local authority of any federally owned lands which are within the boundaries of any river included within the system under clause (ii).

(b) A wild, scenic or recreational river area eligible to be included in the system is a free-flowing stream and the related adjacent land area that possesses one or more of the values referred to in section 1, subsection (b) of this Act. Every wild, scenic or recreational river in its free-flowing condition, or upon restoration to this condition, shall be considered eligible for inclusion in the national wild and scenic rivers system and, if included, shall be classified, designated, administered as one of the following:

(1) Wild river areas - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive America.

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SEC. 3 (a) The following rivers and the land adjacent thereto are hereby designated as components of the national wild and scenic rivers system:

(Designation language for individual W&S rivers)

(b) The agency charged with the administration of each component of the national wild and scenic rivers system designated by subsection (a) of this section shall, within one year from the date of designation of such component under subsection (a) (except where a different date is provided in subsection (a)) establish detailed boundaries therefor (which boundaries shall include an average of not more than 320 acres of land per mile measured from the ordinary high water mark on both sides of the river); and determine which of the classes outlined in section 2, subsection (b), of this Act best fit the river or its various segments.

Notice of the availability of the boundaries and classification,

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related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved.

SEC. 6. (a)(1) The Secretary of the Interior and the Secretary of Agriculture are each authorized to acquire lands and interests in land within the authorized boundaries of any component of the national wild and scenic rivers system designated in section 3 of this Act, or hereafter designated for inclusion in the system by Act of Congress, which is administered by him, but he shall not acquire fee title to an average of more than 100 acres per mile on both sides of the river. Lands owned by a State may be acquired only by donation or by exchange in accordance with subsection (d) of this section. Lands owned by an Indian tribe or a political subdivision of a State may not be acquired without the consent of the appropriate governing body thereof as long as the Indian tribe or political subdivision is following a plan for management and protection of the lands which the Secretary finds protects the land and assures its use for purposes consistent with this Act. Money appropriated for Federal purposes from the land and water conservation fund shall, without prejudice to the use of appropriations from other sources, be available to Federal departments and agencies for the acquisition of property for the purposes of this Act.

(2) When a tract of land lies partially within and partially outside the boundaries of a component of the National Wild and Scenic System, the appropriate Secretary may, with the consent of the land owners for the portion outside of the boundaries, acquire the entire tract. The land or interest therein so acquired outside the boundaries shall not be counted against the average one-hundred-acre-per-mile limitation of subsection (a)(1). The lands or interests therein outside such boundaries, shall be disposed of, consistent with existing authorities of law, by sale, lease, or exchange.

(b) If 50 per centum or more of the entire acreage outside of the ordinary high water mark on both sides of the river within a federally administered wild, scenic or recreational river area is owned in fee title by the United States, by the State or States within which it lies, or by political subdivisions of those States, neither Secretary shall acquire fee title to any lands by condemnation under authority of this Act. Nothing contained in this section, however, shall preclude the use of condemnation when necessary to clear title or to acquire scenic easements or other such easements as are reasonably necessary to give the public access to the river and to permit its members to traverse the length of the area or of selected segments thereof

(c) Neither the Secretary of the Interior nor the Secretary of Agriculture may acquire lands by condemnation, for the purpose of including such lands in any national wild, scenic or recreational river area, if such lands are located within any incorporated city, village, or borough which has in force and applicable to such lands a duly adopted, valid zoning ordinance that conforms with the purposes of this Act. In order to carry out the provisions of this subsection, the appropriate Secretary shall issue guidelines, specifying standards for local zoning ordinances, which are consistent with the purposes of this Act.

The standards specified in such guidelines shall have the object of (A) prohibiting new commercial or industrial uses other than commercial or industrial uses which are consistent with the purposes of this Act, and (B) the protection of the bank lands by means of acreage, frontage, and setback requirements on development.

(d) The appropriate Secretary is authorized to accept title to non-Federal property within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of this Act or hereafter designated for inclusion in the system by Act of Congress and, in exchange therefor, convey to the grantor any federally owned property which is under his jurisdiction within the State in which the component lies and which he classifies as suitable for exchange or other disposal. The values of the properties so exchanged either shall be approximately equal or, if they are not approximately equal, shall be equalized by the payment of cash to the grantor or the Secretary as the circumstances require.

(e) The head of any Federal department or agency having administrative jurisdiction over any lands or interests in land within the authorized boundaries of any federally administered component of the national wild and scenic rivers system designated in section 3 of his Act or hereafter designated for inclusion in the system by Act of Congress is authorized to transfer to the appropriate Secretary jurisdiction over such lands for administration in accordance with the provisions of this Act. Lands acquired by or transferred to the Secretary of Agriculture for the purposes of this Act within or adjacent to a national forest shall upon such acquisition or transfer become national forest lands.

(f) The appropriate Secretary is authorized to accept donations of land and interests in land, funds, and other property for use in connection with his administration of the national wild and scenic rivers system.

(g)(1) Any owner or owners hereinafter in this subsection referred to as "owner" of improved property on the date of its acquisition, may retain for themselves and their successors or assigns a right of use and occupancy of the improved property for noncommercial residential purposes for a definite term not to exceed twenty-five years or, in lieu thereof, for a term ending at the death of the owner, or the death of his spouse, or the death of either or both of them. The owner shall elect the term to be reserved. The appropriate Secretary shall pay to the owner the fair market value of the property on the date of such acquisition less the fair market value on such date of the right retained by the owner.

(2) A right of use and occupancy retained pursuant to this subsection shall be subject to termination whenever the appropriate Secretary is given reasonable cause to find that such use and occupancy is being exercised in a manner which conflicts with the purposes of this Act. In event of such a finding, the Secretary shall tender to the holder of that right an amount equal to the fair market value of that portion of the right which remains unexpired on the date of termination. Such right of use or occupancy shall terminate by operation of law upon tender of the fair market price.

(3) The term "improved property", as used in this Act, means a detached, one-family dwelling (hereinafter referred to as "dwelling"), the construction of which was begun before January 1, 1967, (except where a different date is specifically provided by law with respect to any particular river), together with so much of the land on which the dwelling is situated, the said land being in the same own-

ership as the dwelling, as the appropriate Secretary shall designate to be reasonably necessary for the enjoyment of the dwelling for the sole purpose of noncommercial residential use, together with any structures accessory to the dwelling which are situated on the land so designated.

SEC. 7. (a) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act (41 Stat. 1063), as amended (16 U.S.C. 791a et seq.) on or directly affecting any river which is designated in section 3 of this Act as a component of the national wild and scenic rivers system or which is hereafter designated for inclusion in that system, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to, developments below or above a wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or unreasonably diminish the scenic, recreational, and fish and wildlife values present in the area on the date of designation of a river as a component of the National Wild and Scenic Rivers System. No department or agency of the United States shall recommend authorization of any water resources project that would have a direct and adverse effect on the values for which such river was established, as determined by the Secretary charged with its administration, or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior or the Secretary of Agriculture, as the case may be in writing of its intention so to do at least sixty day in advance, and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act....

(b) The Federal Power Commission shall not license the construction of any dam, water conduit, reservoir, powerhouse, transmission line, or other project works under the Federal Power Act, as amended on or directly affecting any river which is listed in section , subsection (a), of this Act, and no department or agency of the United States shall assist by loan, grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river might be designated, as determined by the Secretary charged responsible for its study or approval -

(i) during the ten-year period following enactment of this Act or for a three complete fiscal year period following any Act of Congress designating any river for potential addition to the national wild and scenic rivers system, whichever is later, unless, prior to the expiration of the relevant period, the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, on the basis of study, determine that such river should not be included in the national wild and scenic river system and notify the Committees on Interior and Insular Affairs of the United States Congress, in writing, including a copy of the study upon which the determination was made, at least one hundred and eighty days while Congress is in session prior to publishing notice to that effect in the Federal Register: Provided, That if any Act designating any river or rivers for potential

addition to the national wild and scenic river system provides a period for the study or studies which exceeds such three complete fiscal year period the period provided for in such Act shall be substituted for the three complete fiscal year period in the provisions of this clause (i); and

(ii) during such interim period from the date a report is due and the time a report is actually submitted to Congress; and

(iii) during such additional period thereafter as, in the case of any river the report for which is submitted to the President and the Congress for inclusion in the national wild and scenic rivers system, is necessary for congressional consideration thereof or, in the case of any river recommended to the Secretary of the Interior under section 2(a)(ii) of this Act, is necessary for the Secretary's consideration thereof, which additional period, however, shall not exceed three years in the first case and one year in the second. Nothing contained in the foregoing sentence, however, shall preclude licensing of, or assistance to developments below or above a potential wild, scenic or recreational river area or on any stream tributary thereto which will not invade the area or diminish the scenic, recreational, and fish and wildlife values present in the potential wild, scenic or recreational river area on the date of designation of a river for study as provided by section 5 of this Act. No department or agency of the United States shall, during the periods hereinbefore specified, recommend authorization of any water resources project on any such river or request appropriations to begin construction of any such project, whether heretofore or hereafter authorized, without advising the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture in writing of its intention so to do at least sixty day in advance of doing so and without specifically reporting to the Congress in writing at the time it makes its recommendation or request in what respect construction of such project would be in conflict with the purposes of this Act and would affect the component and the values to be protected by it under this Act.

(c) The Federal Power Commission and all other Federal agencies shall, promptly upon enactment of this Act, inform the Secretary of the Interior and, where national forest lands are involved, the Secretary of Agriculture, of any proceedings, studies, or other activities within their jurisdiction which are now in progress and which affect or may affect any of the rivers specified in section 5, subsection (a), of this Act. They shall likewise inform him of any such proceedings, studies, or other activities which are hereafter commenced or resumed before they are commenced or resumed.

(d) Nothing in this section with respect to the making of a loan or grant shall apply to grants made under the Land and Water Conservation Act of 1965 (78 Stat. 897; 16 U.S.C. 4601-5 et seq.).

SEC. 8. (a) All public lands within the authorized boundaries of any component of the national wild and scenic rivers system which is designated in section 3 of this Act or which is hereafter designated for inclusion in that system are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States. This subsection shall not be construed to limit the authorities granted in section 6(d) or 14A of this Act.(b) All public lands which constitute the bed or bank, or are within one-quarter mile of the bank, of any river which is listed in section 5, subsection (a), of this Act are hereby withdrawn from entry, sale, or other disposition under the public land laws of the United States for the periods specified in section 7, subsection (b), of this Act....

SEC. 9. (a) Nothing in this Act shall affect the applicability of the United States mining and mineral leasing laws within components of the national wild and scenic rivers system except that —

(i) all prospecting, mining operations, and other activities on mining claims which, in the case of a component of the system designated in section 3 of this Act, have not heretofore been perfected or which, in the case of a component hereafter designated pursuant to this Act or any other Act of Congress, are not perfected before its inclusion in the system and all mining operations and other activities under a mineral lease, license, or permit issued or renewed after inclusion of a component in the system shall be subject to such regulations as the Secretary of the Interior or, in the case of national forest lands, the Secretary of Agriculture may prescribe to effectuate the purposes of this Act;

(ii) subject to valid existing rights, the perfection of, or issuance of a patent to, any mining claim affecting lands within the system shall confer or convey a right or title only to the mineral deposits and such rights only to the use of the surface and the surface resources as are reasonably required to carrying on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of the Interior or, in the case of national forest lands, by the Secretary of Agriculture.

(iii) subject to valid existing rights, the minerals in Federal lands which are part of the system and constitute the bed or bank or are situated within one-quarter mile of the bank of any river designated a wild river under this Act or any subsequent Act are hereby withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws including, in both cases, amendments thereto.

Regulations issued pursuant to paragraphs (i) and (ii) of this subsection shall, among other things, provide safeguards against pollution of the river involved and unnecessary impairment of the scenery within the components in question.

(b) The minerals in any Federal lands which constitute the bed or bank or are situated within one-quarter mile of the bank of any river which is listed in section 5, subsection (a) of this Act are hereby withdrawn from all forms of appropriation under the mining and leasing laws during the periods specified in section 7, subsection (b) of this Act. Nothing contained in this subsection shall be construed to forbid prospecting or the issuance of leases, licenses, and permits under the mineral leasing laws subject to such conditions as the Secretary of the Interior and, in the case of national forest lands, the Secretary of Agriculture find appropriate to safeguard the area in the event it is subsequently included in the system....

SEC. 10 (a) Each component of the national wild and scenic rivers system shall be administered in such manner as to protect and enhance the values which caused it to be included in said system without, insofar as is consistent therewith, limiting other uses that do not substantially interfere with public use and enjoyment of these values. In such administration primary emphasis shall be given to protecting its esthetic, scenic, historic, archeologic, and scientific features. Management plans for any such component may establish varying degrees of intensity for its protection and development, based on the special attributes of the area.

(b) Any portion of a component of the national wild an

scenic rivers system that is within the national wilderness preservation system, as established by or pursuant to the Act of September 3, 1964 (78 Stat. 890; 16 U.S.C., ch. 23), shall be subject to the provisions of both the Wilderness Act and this Act with respect to preservation of such river and its immediate environment, and in case of conflict between the provisions of these Acts the more restrictive provisions apply.

(c) Any component of the national wild and scenic rivers system that is administered by the secretary of the Interior through the National Park Service shall become a part of the national park system, and any such component that is administered by the Secretary through the Fish and Wildlife Service shall become a part of the national wildlife refuge system. The lands involved shall be subject to the provisions of this Act and the Acts under which the national park system or national wildlife system, as the case may be, is administered, and in the case of conflict between the provisions of these Acts, the more restrictive provisions shall apply. The Secretary of the Interior, in his administration of any component of the national wild and scenic rivers system, may utilize such general statutory authorities relating to areas of the national park system and such general statutory authorities otherwise available to him for recreation and preservation purposes and for the conservation and management of natural resources as he deems appropriate to carry out the purposes of this Act.

(d) The Secretary of Agriculture, in his administration of any component of the national wild and scenic rivers system area, may utilize the general statutory authorities relating to the national forest in such manner as he deems appropriate to carry out the purposes of this Act.

(e) The Federal agency charged with the administration of any component of the national wild and scenic rivers system may enter into written cooperative agreements with the Governor of a State, the head of any State agency, or the appropriate official of a political subdivision of a State for State or local governmental participation in the administration of the component. The States and their political subdivisions shall be encouraged to cooperate in the planning and administration of components of the system which include or adjoin State- or County-owned lands.

SEC. 11. (a) The Secretary of the Interior shall encourage and assist the States to consider, in formulating and carrying out their comprehensive statewide outdoor recreation plans and proposals for financing assistance for State and local projects submitted pursuant to the Land and Water Conservation Fund Act of 1965 (78 Stat. 897), needs and opportunities for establishing State and local wild, scenic and recreational river areas.

(b) (1) The Secretary of the Interior, the Secretary of Agriculture, or the head of any Federal agency, shall assist, advise, and cooperate with States or their political subdivisions, landowners, private organizations, or individuals to plan, protect, and manage river resources. Such assistance, advice, and cooperation may be through written agreements or otherwise. This authority applies within or outside a federally administered area and applies to rivers which are components of the Wild and Scenic Rivers System and to other rivers. Any agreement under this section may include provisions for limited financial or other assistance to encourage participation in the acquisition, protection and management of river resources.

(2) Whenever appropriate in furtherance of this Act, the

Secretary of Agriculture and the Secretary of the Interior are authorized and encouraged to utilize the following:

(A) For activities on federally owned land, the Volunteers in the Parks Act of 1969 (16 U.S.C. 18gj) and the Volunteers in the Forest Act of 1972 (16 U.S.C. 558a-558d).

(B) For activities on all other lands, section 6 of the Land and Water Conservation Fund Act of 1965 (relating to the development of statewide comprehensive outdoor recreation plans).

(3) For purposes of this subsection, the appropriate Secretary or the head of any Federal agency may utilize and make available Federal facilities, equipment, tools, and technical assistance to volunteers and volunteer organizations, subject to such limitations and restrictions as the appropriate Secretary or the head of any Federal agency deem necessary or desirable.

(4) No permit or other authorization provided for under provision of any other Federal law shall be conditioned on the existence of any agreement provided for in this section.

SEC. 12 (a) The Secretary of the Interior, the Secretary of Agriculture, and the head of any other Federal department or agency having jurisdiction over any lands which include, border upon, or are adjacent to, any river included within the National Wild and Scenic Rivers System or under consideration for such inclusion in accordance with section 2(a)(ii), 3(a), or 5(a), shall take such action respecting management policies, regulations, contracts, plans, affecting such lands, following the date of enactment of this sentence, as may be necessary to protect such rivers in accordance with the purposes of this Act. Such Secretary or other department or agency head shall, where appropriate, enter into written cooperative agreements with the appropriate State and local official for the planning, administration, and management of Federal lands which are within the boundaries of any rivers for which approval has been granted under section 2(a)(ii). Particular attention shall be given to scheduled timber harvesting, road construction, and similar activities which might be contrary to the purposes of this Act.

(b) Nothing in this section shall be construed to abrogate any existing rights, privileges, or contracts affecting Federal lands held by any private party without the consent of said party.

(c) The head of any agency administering a component of the national wild and scenic rivers system shall cooperate with the Administrator, Environmental Protection Agency and the appropriate State water pollution control agencies for the purpose of eliminating or diminishing the pollution of waters of the river.

SEC. 13 (a) Nothing in this Act shall affect the jurisdiction or responsibilities of the States with respect to fish and wildlife. Hunting and fishing shall be permitted on lands and waters administered as parts of the system under applicable State and Federal laws and regulations unless, in the case of hunting, those lands or waters are within a national park or monument. The administering Secretary may, however, designate zones where, and establish periods when, no hunting is permitted for reasons of public safety, administration, or public use and enjoyment and shall issue appropriate regulations after consultation with the wildlife agency of the State or States affected.

(b) The jurisdiction of the States and the United States over waters of any stream included in a national wild, scenic or recreational river area shall be determined by established principles of law. Under

the provisions of this Act, any taking by the United States of a water right which is vested under either State or Federal law at the time such river is included in the national wild and scenic rivers system shall entitle the owner thereof to just compensation. Nothing in this Act shall constitute an express or implied claim or denial on the part of the Federal Government as to exemption from State water laws.

(c) Designation of any stream or portion thereof as a national wild, scenic or recreational river area shall not be construed as a reservation of the waters of such streams for purposes other than those specified in this Act, or in quantities greater than necessary to accomplish these purposes.

(d) The jurisdiction of the States over waters of any stream included in a national wild, scenic or recreational river area shall be unaffected by this Act to the extent that such jurisdiction may be exercised without impairing the purposes of this Act or its administration.

(e) Nothing contained in this Act shall be construed to alter, amend, repeal, interpret, modify, or be in conflict with any interstate compact made by any States which contain any portion of the national wild and scenic rivers system.

(f) Nothing in this Act shall affect existing rights of any State, including the right of access, with respect to the beds of navigable streams, tributaries, or rivers (or segments thereof) located in a national wild, scenic or recreational river area.

(g) The Secretary of the Interior or the Secretary of Agriculture, as the case may be, may grant easements and rights-of-way upon, over, under, across, or through any component of the national wild and scenic rivers system in accordance with the laws applicable to the national park system and the national forest system, respectively: Provided, That any conditions precedent to granting such easements and rights-of-way shall be related to the policy and purpose of this Act.

SEC. 14. (a) The claim and allowance of the value of an easement as a charitable contribution under section 170 of title 26, United States Code, or as a gift under section 2522 of said title shall constitute an agreement by the donor on behalf of himself, his heirs, and assigns that, if the terms of the instrument creating the easement are violated, the donee or the United States may acquire the servient estate of its fair market value as of the time the easement was donated minus the value of the easement claimed and allowed as a charitable contribution or gift.

(b) For the conservation purposes of preserving or enhancing the values of components of the National Wild and Scenic River System, and the environs thereof as determined by the appropriate Secretary, landowners are authorized to donate or otherwise convey qualified real property interests to qualified organizations consistent with section 170(h)(3) of the Internal Revenue Code of 1954. Such interest may include, but shall not be limited to, rights-of-way, open space, scenic, or conservation easements without regard to any limitation on the nature of the estate or interest otherwise transferable within the jurisdiction where the land is located. The conveyance of any such interest in land in accordance with this subsection shall be deemed to further a Federal conservation policy and yield a significant public benefit for purposes of section 6 of Public Law 96-541.

SEC. 14A. (a) Where appropriate in the discretion of the Secretary, he may lease federally owned land (or any interest therein)

which is within the boundaries of any component of the National Wild and Scenic Rivers system and which has been acquired by the Secretary under this Act. Such lease shall be subject to such restrictive covenants as may be necessary to carry out the purposes of this Act.

(b) Any land to be leased by the Secretary under this section shall be offered first for such lease to the person who owned such land immediately before its acquisition by the United States.

SEC. 15....

SEC. 16. As used in this Act, the term—

(a) "River" means a flowing body of water or estuary or a section, portion, or tributary" thereof, including rivers, creeks, runs, kills, rills, and small lakes.

(b) "Free-flowing", as applied to any river or section of a river, means existing or flowing" in natural condition without impoundment, diversion, straightening, rip-rapping, or other modification of the waterway. The existence, however, of low dams, diversion works, and other minor structures at the time any river is proposed for inclusion in the national wild and scenic river system shall not automatically bar its consideration for such inclusion: Provided, That this shall not be construed to authorize, intend, or encourage future construction of such structures within components of the national wild and scenic rivers system.

(c) "Scenic easement" means the right to control the use of land (including the air space above such land) within the authorized boundaries of a component of the wild and scenic river system, for the purpose of protecting the natural qualities of a designated wild, scenic or recreational river area, but such control shall not affect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. For any designated wild and scenic river, the appropriate Secretary shall treat the acquisition of fee title with the reservation of regular existing uses to the owner as a scenic easement for the purposes of this Act. Such an acquisition shall not constitute fee title ownership for purposes of section 6(b).

SEC.17....

(Provisions of the Wild and Scenic Rivers Act that are applicable only to specific rivers have been deleted from this version of the Act in the interest of brevity. The Federal Power Commission is now the Federal Energy Regulatory Commission.)

*Friends of the River & the Merced Canyon Committee 3/15/89
Printing courtesy of the Planning and Conservation League*

Appendix 2

Questions and Answers on the WILD SCENIC RIVERS PROGRAM

Prepared by the Forest Service and National Park Service

1. Q. What is a Wild and Scenic River?

A. It is a free flowing river or river segment with outstanding scenic, recreational, geologic, fish and wildlife, historic, archeologic, or other values which has been designated by act of Congress or the Secretary of the Interior as a part of the National Wild and Scenic Rivers System. (Public Law 90-542)

2. Q. Why do rivers need to be protected and managed under the Wild and Scenic Rivers Act?

A. There are three general reasons for including rivers in the Wild and Scenic Rivers System.

1. Some of the more prominent rivers can be included as a way of providing national recognition, — the "hall of fame" for great rivers that are a part of our nation's history and a legacy to future generations.
2. Other rivers may be included in the System because their values are seriously threatened by water developments, mining, residential developments, etc. The Wild and Scenic Rivers Act becomes the legal mechanism for protective action.
3. The third category of rivers is becoming the biggest list — those with unique values which require special management protection so they can be preserved for the future. These requirements are documented in a management plan for each river, as required by the Wild and Scenic Rivers Act.

3. Q. How does the Wild and Scenic Rivers Act work?

A. Designation of a river under the Wild and Scenic Rivers Act affords the river certain legal protections from adverse development and provides a mechanism for management of river resources. The principal effect of the Act is to preclude or severely limit the construction of dams and other water resources projects which might affect the free flowing nature of the river and its other resources. Designation also affects the management of federal lands in the river corridor. Rights to future development of private lands can be purchased under the land acquisition authorities.

Management standards or requirements have been developed for each of the three classifications of Wild and Scenic Rivers — wild, scenic, and recreational. The appropriate classification depends on the level of use in the river corridor at the time of designation. A river may be classified entirely under one category or separate segments of the river may be classified under different categories. The three classifications are briefly described on the following page.

— **WILD** — rivers that are free of impoundments and generally inaccessible except by trail, with watershed or shorelines essentially primitive and waters unpolluted. These represent vestiges of primitive

America. Most of these wild river segments are located on public lands.

— **SCENIC** — rivers that are free of impoundments, with shoreline or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads.

— **RECREATIONAL** — rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

4. Q. How does Wild and Scenic River designation compare to National Park or Wilderness designation?

A. These designations are very different, however, they are often confused. The goal of a National Park is to preserve the natural physical and biological environment. Wilderness areas are established in undeveloped areas of 5,000 acres or more, predominantly on Federal lands, to preserve their primitive, undeveloped characteristics. People do not reside as a permanent part of a National Park or Wilderness Area, and the long-term goal of the managing Federal agency is usually to purchase any private lands within their boundaries.

In contrast, Wild and Scenic Rivers are established to maintain the existing conditions — including the natural resource values, the scenery, the recreational uses, the historical values, the local communities, and the existing land use within the river corridor. People have a very important active role as part of the river corridor environment. Some of them may be landowners who reside there on a year-round basis.

5. Q. What is the role of the Federal government on Wild and Scenic Rivers?

A. Rivers which are designated by act of Congress are administered by one of the following agencies:

Forest Service — Department of Agriculture

National Park Service — Department of the Interior

Bureau of Land Management — Department of the Interior

Fish and Wildlife Service — Department of the Interior

It is the responsibility of the federal agencies to assure that the values for which the river was designated are protected and made available for the public to enjoy. Some examples of this federal role are to:

- develop the river management plan, in consultation with State and local agencies and private interests.
- manage the federally owned lands in the river corridor.
- control recreational use on the river if necessary to maintain river qualities.

— participate in legal proceedings or Congressional actions which pertain to activities and uses of the river corridor.

6. Q. What is the role of the State government on Federally administered Wild and Scenic Rivers?

A. The State has a very important role. The State's responsibilities include:

- regulations and enforcement for fishing and hunting activities.
- water rights and water appropriation.
- development and administration of water quality standards.
- administration of State land use regulations on non-federal lands.
- managing State lands and State facilities (including State highways, parks, recreation areas, etc.) along the river.

7. Q. Can the Federal Government zone private lands?

A. The Federal government has no power to zone private lands. Zoning is a power of state and local governments. There are provisions of the Act that call upon the Federal agencies to encourage local land use planning by issuing guidelines for local and state governments for consideration in protecting river corridors which include areas within incorporated cities, villages or boroughs. These guidelines are not binding on local governments nor can the Federal government force the local governments to adopt them.

8. Q. What effect will designation have on the use of private property?

A. Ongoing regular uses of private lands, particularly those existing at the time that the river is designated, are not directly affected. Most private land use such as homes and farms are compatible with Wild and Scenic River management. There is no intent to remove all use, developments, or inhabitants from the river corridor. The Management plan for the river should identify types of land uses and developments which are considered compatible or incompatible with protection of the rivers values.

9. Q. Will designation lead to people trespassing on my property?

A. Designation does not open private lands to public access. Landowners can continue to post their property. Developed access points and recreation user facilities will usually help to reduce the trespass and impact on both private and public lands.

10. Q. What effect will designation have on property values and the ability to sell private property?

A. Wild and Scenic Rivers enjoy a measure of protection from future incompatible land uses and development, therefore, designation can have a positive impact on property values and marketability. Other factors such as location of the river, type and location of the property, and advertising can have a significant influence on property values.

In recent studies on two Wild and Scenic Rivers, the Upper Delaware and the Rogue, property values in the designated river corridors were shown to increase at a higher rate than those for adjacent lands. Realtors on The Upper Delaware frequently cite the designation in sales listings. The ability to buy and sell property will not be affected by designation.

11. Q. Under what circumstances would private property be purchased by the federal government?

A. The Federal government would consider acquiring private lands if necessary to protect the values of the river corridor, or to provide public access. Acquisition may be by purchase, exchange, or donation, and may be for fee title to all or part of the land, or for easements. In almost all cases, this is accomplished on a willing seller - willing buyer basis.

With a scenic easement the landowner maintains ownership, but agrees to limit the type of use or development that can occur on his land. When an easement is acquired, the landowner retains title to the land, and retains the right to sell it, rent it, leave it to heirs or restrict public access. Scenic easements not only protect the river values, but can act to protect private properties from adverse development on adjacent private lands.

12. Q. Under what circumstances would condemnation be used?

A. Federal agencies only use condemnation as a last resort to prevent land use or developments from degrading the outstanding values of the river corridor.

Condemnation of lands has been very limited. For example, the Forest Service recently found that of the more than 100,000 acres of private land contained within the corridors of the rivers it manages in California, Oregon, and Washington, no land has been acquire through fee title condemnation.

The Wild and Scenic Rivers Act places greater restrictions on the use of condemnation than exists for other areas of the National Forests, National Parks, and other Federal areas. For example, in the National Forests or National Parks, condemnation is available to acquire fee title to any private lands needed for public purposes. This is not true for private lands within Wild and Scenic River boundaries because the Act includes specific restrictions on the use of condemnation. Fee title condemnation is prohibited if more than 50% of the corridor land is publicly owned. Most rivers considered for designation are more than 50% publicly owned.

13. Q. What effect will Wild and Scenic River designation have on water rights and water development?

A. Designation has no effect on existing water rights. At the time of designation, the managing agency will determine the instream flow that is sufficient to maintain the river values — water quality, river recreation, fisheries, etc. Existing water rights may be purchased by the Federal government if necessary to meet the instream flow requirements, or a negotiated agreement with the water users may be pre-

pared to provide for instream flows.

Existing irrigation systems and other water development facilities are not disturbed. Alterations to existing systems and new water projects which require federal permits may be allowed as long as they do not have an adverse effect on the values of the river corridor.

What effect does Wild and Scenic River designation have on timber harvest and agriculture?

For privately owned lands, timber harvest and agriculture uses are generally unaffected. For Federally owned timber and grazing lands, the Act requires that management of these resources be done in a manner to protect river values.

How can landowners, citizens, and local governments participate in Wild and Scenic River designation and management?

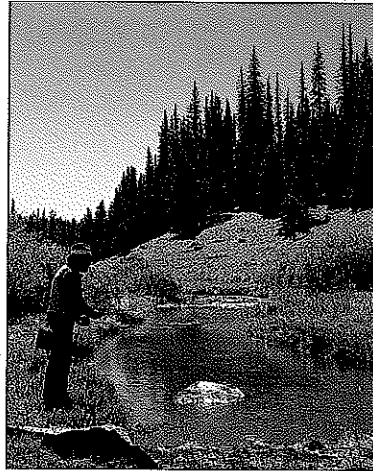
Public interest and support is an important ingredient in the political process that leads to designation of a Wild and Scenic River. The most effective efforts are those that stand with and are firmly based at the grass roots-level. They become the source of information, the problem solvers and the link with the Congressional delegations. There is no substitute for public involvement in this process.

Wild and Scenic River management is everybody's responsibility. Not just the Federal agencies. Rivers do not follow ownership or administrative boundaries, therefore they must be managed as a cooperative partnership.

Landowners, citizens, and local governments are encouraged to get involved by contacting the local Forest Service, Park Service, or Bureau of Land Management offices, reviewing study response and management plans, voicing opinions and suggestions, and participating in local interest group activities. Landowners can take the initiative to protect the river values on their lands and volunteer to help with protection programs on public lands. Local government officials can take the responsibility to assure that development and use of the river corridor within their jurisdiction is managed and controlled to minimize the impact on resource values. These are a few of the many opportunities that exist for participating in the Wild and Scenic Rivers program.

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credits



COLOR PHOTOS

Front Cover:
WEST CLEAR CREEK BY NEAL BERG

Back Cover:
THE VIRGIN RIVER BY DICK DEITRICH

THIS PAGE

Top:
THE BLACK RIVER BY DICK DEITRICH

Middle:
CIENAGA CREEK BY JERRY SIEVE

Bottom:
THE UPPER VERDE RIVER BY DAVID ELMS

The Arizona Rivers Coalition proposal for protection of Arizona rivers and streams would not be possible without the cooperative spirit of many diverse organizations and people: sportsmen, conservation groups, outdoor recreation clubs, businesses and individuals. The protection that will be given to our streams as a result of this work will be our thanks and reward. A few people stand out for the amount of time, energy, inspiration and dedication they gave.

SPECIAL THANKS TO:

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ARIZONA GAME AND FISH DEPARTMENT, ARIZONA STATE PARKS
and ARIZONA DEPARTMENT OF WATER RESOURCES.

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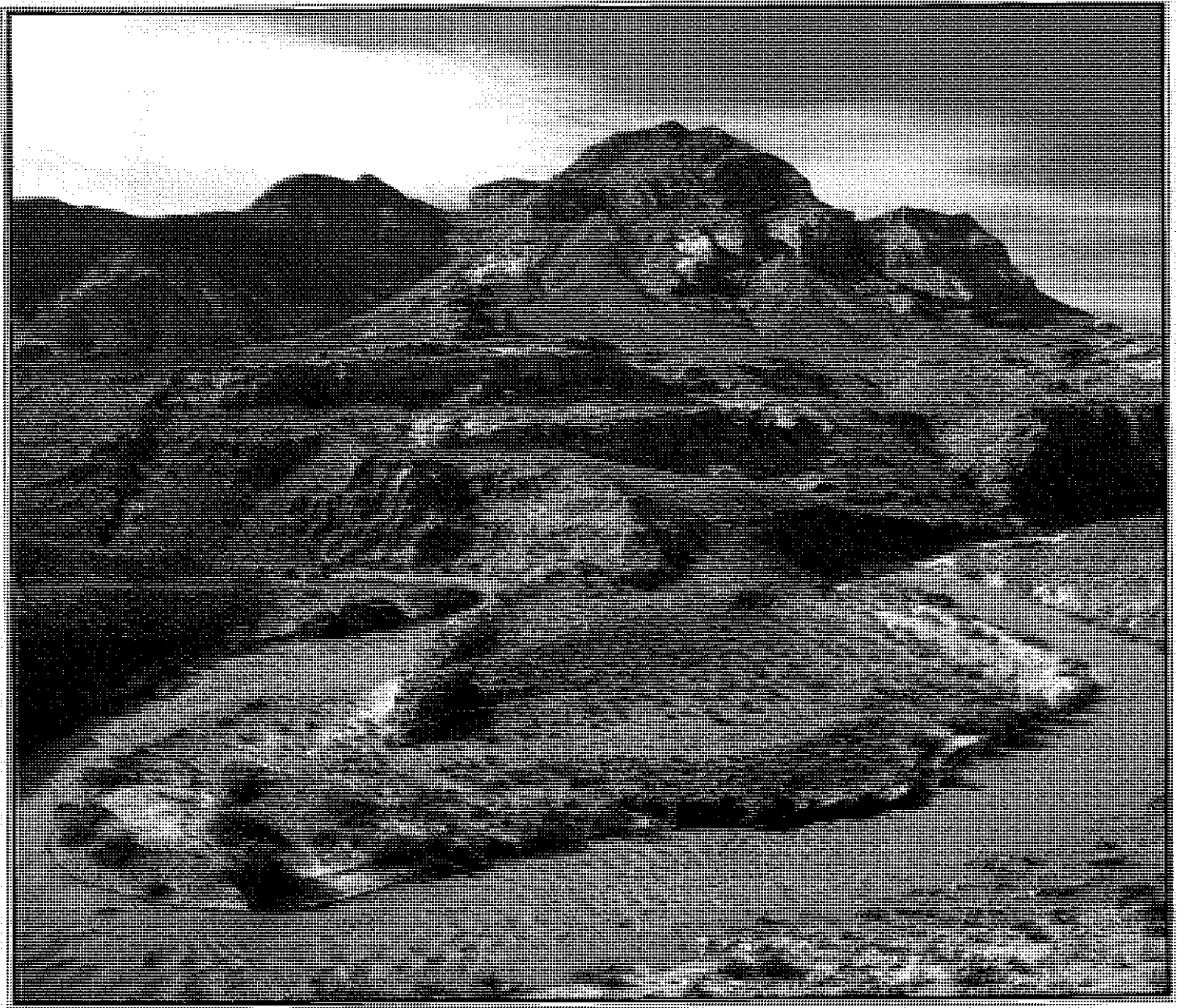
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We thank you.

The generosity of The Marshall Fund of Arizona and Recreational Equipment Inc. (REI) allows our work to continue.



Arizona is laced with ribbons of life-giving streams and rivers which provide the moisture and habitat for wildlife and recreation in otherwise forbidding country. I would like to sound a call-to-action to all of us who care about preserving Arizona's natural heritage to move vigorously ahead with WILD AND SCENIC RIVER legislation right now. Protecting our natural flowing streams makes good economic sense ...and is simply the right thing to do.

— **BRUCE BABBITT**, March 11, 1991



THE VIRGIN RIVER

The Virgin River is the last river to flow from a subalpine to desert ecosystem without a major dam—yet. Designating the Virgin as a *WILD AND SCENIC RIVER* is needed to protect this fascinating and fragile ecosystem.