United States
Department of
Agriculture

Forest Service

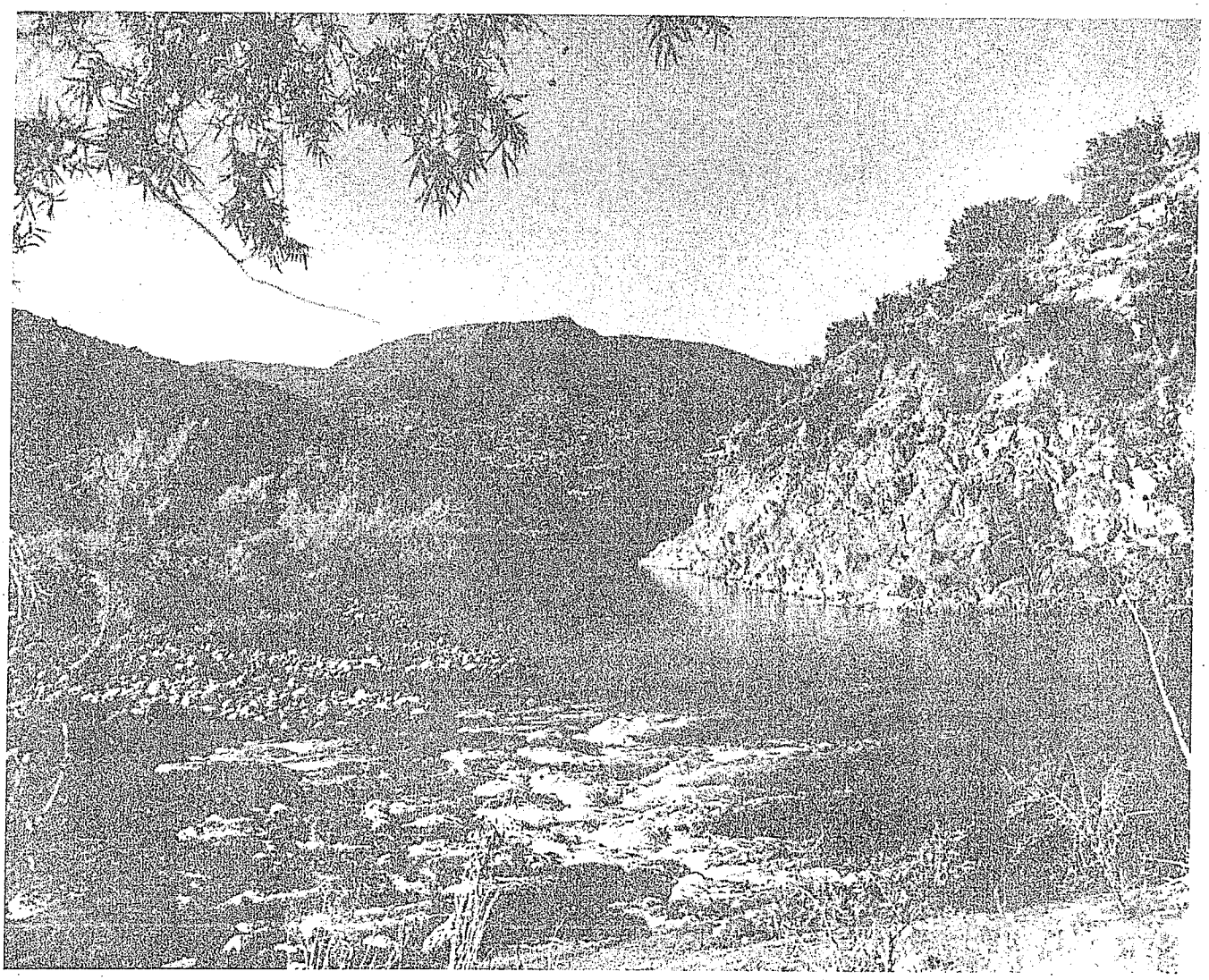
Coconino, Prescott and
Tonto National Forests

Southwestern Region,
April 1981

VERDE RIVER

Wild and Scenic River Study Report and Environmental Impact Statement

FINAL
SEPT. 1982



DEPARTMENT OF AGRICULTURE
OFFICE OF THE SECRETARY
WASHINGTON, D. C. 20250

JUN 11 1982

The President
The White House
Washington, DC 20500

Dear Mr. President:

I take pleasure in transmitting the report on the Verde River in Arizona. The report and my recommendations are in response to the provisions of the Wild and Scenic Rivers Act (82 Stat. 906 as amended; 16 U.S.C. 1271-1287). The Forest Service in cooperation with other Federal agencies conducted a detailed study of the river. The enclosed final environmental impact statement and study report have gone through the 90-day review required by Section 4(b) of the Wild and Scenic Rivers Act, and the public review required by Section 102 of the National Environmental Policy Act of 1969. The comments received during the review are a part of the enclosed report.

The proposal for designation of the Verde River as a component of the National Wild and Scenic Rivers System is viable. There are no apparent conflicts with the programs of other Federal agencies. The lands involved are primarily in Federal ownership and administered by the Forest Service.

The study of the Verde River found that the entire study segment of 78 miles met the criteria for inclusion in the National Wild and Scenic Rivers System. However, nondesignation of the upper 38.5 miles of the river would lessen the impact from designation on about 1,500 acres of private land and result in savings of an estimated $2.1 million for the acquisition of scenic and access easements and over $300,000 in development costs. I recommend, therefore, that 39.5 miles of the qualifying segment be designated for inclusion in the system.

The recommended segment flows through National Forest System lands within three National Forests. The area encompassed within the proposed boundaries is approximately 12,640 acres including about 26 acres in private ownership. It is recommended that administration of the river area be by the Department of Agriculture, Forest Service. The estimated additional costs for administration of the Verde River as a component of the National Wild and Scenic Rivers System are $233,000 for development and $36,000 for annual operation and maintenance. The development would occur over a 10-year period following enactment.

Although designation of the river is strongly supported, the local landowners have expressed concern that such designation may adversely affect their property rights and foreclose development opportunities. Our recommendation, however, will affect only one parcel of private land and the existing uses

of the land will not be affected by designation. Also, the study found that the effects on resource uses in the recommended segment will be minimal. At the present time, the area is withdrawn from mineral entry by a water and power withdrawal. The opportunity to develop water resource projects in the designated segment would be foregone, but no feasible sites have been identified. Grazing use of the National Forest System lands will continue to the extent that the lands are capable of supporting such use. There is no commercial timber resource in the area. The effects of designation on the development of the water resources upstream or downstream from the designated segment would be minimal since a project would only need to meet a standard that would not "unreasonably diminish" the values in the segment.

The natural and scenic values of the free-flowing Verde River are unique and irreplaceable resources. I believe the best use of the river and its immediate environment would be served by designation as a component of the National Wild and Scenic Rivers System. Proposed legislation to accomplish this is enclosed.

Sincerely,

John R. Block
Secretary

Enclosures

ENVIRONMENTAL IMPACT STATEMENT

Verde River
Wild and Scenic River Study Report
Yavapai and Gila Counties, Arizona

Responsible Federal Agency: USDA-Forest Service

Coconino National Forest
2323 E. Greenlaw Lane
Flagstaff, Arizona 86001

Prescott National Forest
P. O. Box 2549
Prescott, Arizona 86302

Tonto National Forest
P. O. Box 29070
Phoenix, Arizona 85038

Responsible Official: R. Max Peterson, Chief
Forest Service
South Building
12th and Independence Ave. S.W.
Washington, D. C. 20013

For further information: contact: H. Dewayne Morgan, Forest Planner
Prescott National Forest
P. O. Box 2549
Prescott, Arizona 86302
(602/445-1762)

Abstract:

This Environmental Impact Statement discusses the Verde River's eligibility for inclusion in the National Wild and Scenic Rivers System. The statement describes four alternative actions and the estimated effects of each. Alternative B, a proposal to include 39.5 miles of the river into the National Wild and Scenic Rivers System has been identified as the preferred alternative. The rationale for selecting this action is also discussed.

FINAL
SEPT. 1982

SUMMARY REPORT

I. BRIEF DESCRIPTION OF THE PROPOSED ACTION: The study found that the 78 miles of the Verde River designated for study in the Wild and Scenic Rivers Act, as amended, is eligible for inclusion in the National Wild and Scenic Rivers System. However, the proposed action would designate only 39.5 miles of the river. A 38.5 mile section of the river between the Forest boundary near Paulden and Clarkdale is excluded from the proposal. Of the 39.5 miles of river affected by the action, 22 miles meet scenic river criteria, and the remaining 17.5 miles are suited for a wild river classification.

This recommendation, if implemented, would provide statutory protection of a highly scenic free-flowing river. The action would also provide opportunities for increasing the diversity of dispersed recreation use.

The primary issue emerging from public involvement was, "should the Verde River and its immediate environment (study corridor), or portions thereof, be designated as a component of the National Wild and Scenic Rivers System or should present management direction continue." This question was raised during each public meeting as well as by the Wild and Scenic Rivers Act itself. It is the primary issue addressed in this study.

In addition, several other issues and concerns were identified by the public and are addressed in this study. These issues include:

What is the effect of wild and scenic river designation on opportunities for future development, i.e., diversions, recreation sites, roads, and power transmission line corridors?

If the river and its environment are designated, what would be the extent, provisions, and consequences of easements acquired on private land?

Are there possible conflicts between needs for more water storage and a designation which would maintain a free-flowing river?

What effect would a wild and scenic river designation have on habitat management for the bald eagle?

What effect would a wild and scenic river designation have on geothermal leasing, exploration, and development?

No other Federal actions are discussed in this Environmental Impact Statement.

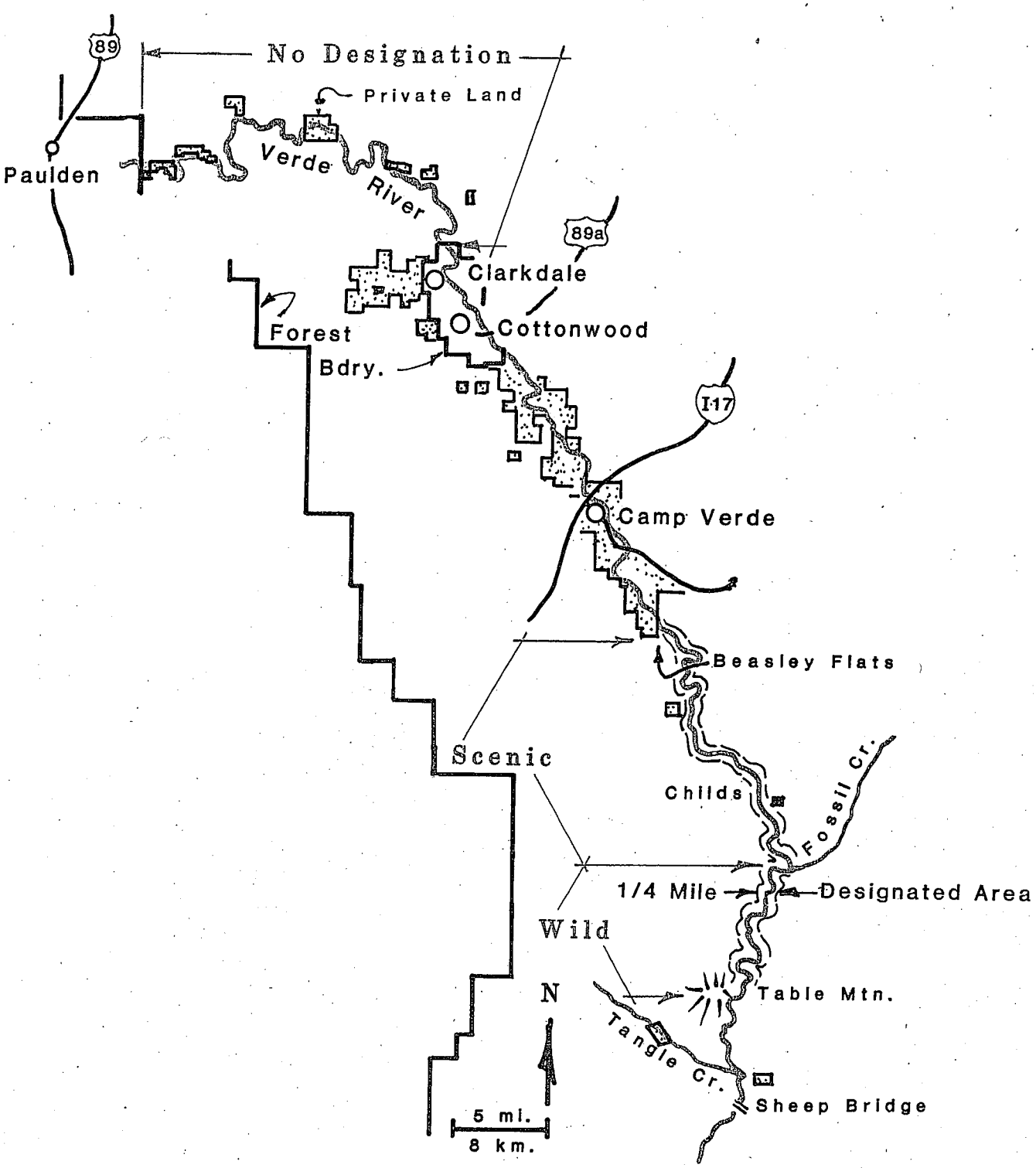
II. ALTERNATIVES CONSIDERED: During the study process, five alternatives were considered. However, one alternative which added 10.5 miles to the south end of the designated study area near Table Mountain, was eliminated during the evaluation process.

A. Alternative A. (No Designation - No Action) Under this alternative, none of the 78 miles of eligible river would be added to the National Wild and Scenic Rivers System. The present management policies and programs of the three National Forests involved would continue. Future management of the National Forest lands would be directed and controlled by the Land and Resource Management Plans developed for the respective Forests in accordance with the National Forest Management Act of 1976. The constraints on existing or future uses of the private lands would be minimal.

B. Alternative B. (Designation of the segment of the river from Beasley Flats to the vicinity of Table Mountain.) This alternative would designate a total of 39.5 miles of eligible river. The segment from Beasley Flats to the confluence of Fossil Creek, 22 miles, would be classified scenic. The remaining segment, 17.5 miles, would be classified wild. Some access routes would be improved and parking and sanitation facilities would be provided as needed. Emphasis would be placed on protecting the natural values of the river area. Zoning ordinances or the acquisition of a scenic easement may be used to control development of the included private lands. This alternative was selected as the preferred alternative (See map on page iv).

C. Alternative C. (Designation of all eligible river segments except for a 5.5 mile section of the river at the upstream end of the study segment.) The alternative would designate all eligible segments except for a 5.5 mile section and would total 72.5 miles. The upstream 33 mile segment would be classified recreational and the remainder would be classified as in Alternative B. A portion of the included 737 acres of private land would be subject to land use controls in the form of zoning ordinances, scenic easements or combinations of both. Management and development of the river area would be the same as in Alternative B.

D. Alternative D. (Designation of all eligible segments.) Under this alternative all eligible segments would be designated for inclusion in the National Wild and Scenic Rivers System. A total of 78 miles of the Verde River would be protected and managed under the Wild and Scenic Rivers Act. This alternative is essentially the same as Alternative C, except an additional 5.5 miles of recreational river would be designated and about 763 acres more of private lands could be subject to land use controls.



Preferred Alternative

III. SUMMARY OF ENVIRONMENTAL EFFECTS: Environmental impacts associated with the proposed action include protection of the free-flowing character of 39.5 miles of the Verde River as well as protection of scenic, fish and wildlife, historic and cultural values. The opportunities for future water impoundments and hydroelectric power developments that would have direct and adverse effects on the designated segments would be foregone.

Improved access routes with associated parking and sanitation facilities would impose minor modification on the natural environment. Increased public use, in the general area of the improvements, would cause minor soil compaction and vegetative alterations. Recreation use is expected to increase as a result of designation.

Zoning ordinances or a scenic easement would restrict the development potential on one parcel of private land within the designated river segment.

IV. CONSULTATION WITH OTHERS: Opportunities for public participation in the study process were provided by five open houses and a workshop session. In addition, contacts were made with Federal and State agency representatives, state-wide user groups, County Board of Supervisors, range permittees, landowners, civic organizations, and other interested individuals. Preliminary alternatives were made available for public review through publication of a newspaper tabloid.

Over eight hundred copies of the Draft Environmental Impact Statement were distributed to the following agencies and organizations, and comments were received by those indicated with an asterisk.

Federal Agencies

Geological Survey
Water Resources Council
National Park Service
Fish and Wildlife Service
* Department of Energy
* USDA - Soil Conservation Service
* Environmental Protection Agency
* Dept. of the Army-Corps of Engineers
* USDI - Office of the Secretary
Bureau of Indian Affairs
Bureau of Land Management
* The Secretary of Commerce
Federal Highway Administration
* Federal Energy Regulatory Commission
* USDI - Water and Power Resources Service
* Dept. of Housing and Urban Development
Heritage Conserv. and Recreation Service
* USDA - Rural Electrification Administ.

Congressional Delegates

Senator Barry Goldwater
Senator Dennis DeConcini
Representative Eldon Rudd
Representative John Rhodes
* Representative Bob Stump
Representative Morris Udall

County

* Gila County Board of Supervisors
Yavapai County Board of Supervisors

Arizona State Agencies

* NACOG, Region III
* State Mine Inspector
* Office of Arid Land Studies
* State Land Department
* Department of Health Services
* Center for Public Affairs
  Outdoor Recreation Coord. Commission
* Agriculture & Horticulture Dept.
* Department of Transportation
* Prescott Historical Society
* OEPAD - Hathaway
* Arizona Natural Heritage Program
* Department of Game and Fish
  Department of Parks and Recreation
  Arizona Department of Public Safety
  Office of Economic Planning and Develop.
* Central Az. Association of Governments

City Councils

* Prescott City Council

Corporations

* Phelps Dodge Corporation
* Arizona Public Service Company
* Atlantic Richfield Company
* Dashney, Steel & Jensen, Incorporated

Arizona State Legislators

Senator Leo Corbit
Congressman Frank Kelley
Congressman Jerry Everall
Senator Boyd Tenney
Congressman John Hays

Organizations

* Arizona Wildlife Federation
* Coconino Sportsmen
* Prescott Audubon Society
* Tucson Audubon Society
* The Prescott Junior Women's Club
* The Izaak Walton League of America
* KOKOPELI (Adventures in Learning)
  Yavapai-Apache Tribe
  Arizona Public Service
* SAEC-Southern Az. Environ. Council
  Northern AZ. Council of Govern.
* Earth First (National Wilderness
  Preservation Organization)
* Arizona Resource Council
* National Audubon Society
* The Wildlife Society
* Salt River Project
* Four Corners Wilderness Workshop
* Arizonans for Wild & Scenic Rivers
* Northern Audubon Society
  Yavapai-Prescott Tribe
* AWWW-Arizonans for Quality Environment
* Verde Nat. Resource Conservation District
* Coconino Nat. Res. Conservation District

Individuals

Comments were received from 332 individuals. See listing of individuals by preferred alternative in Appendix F of this document.

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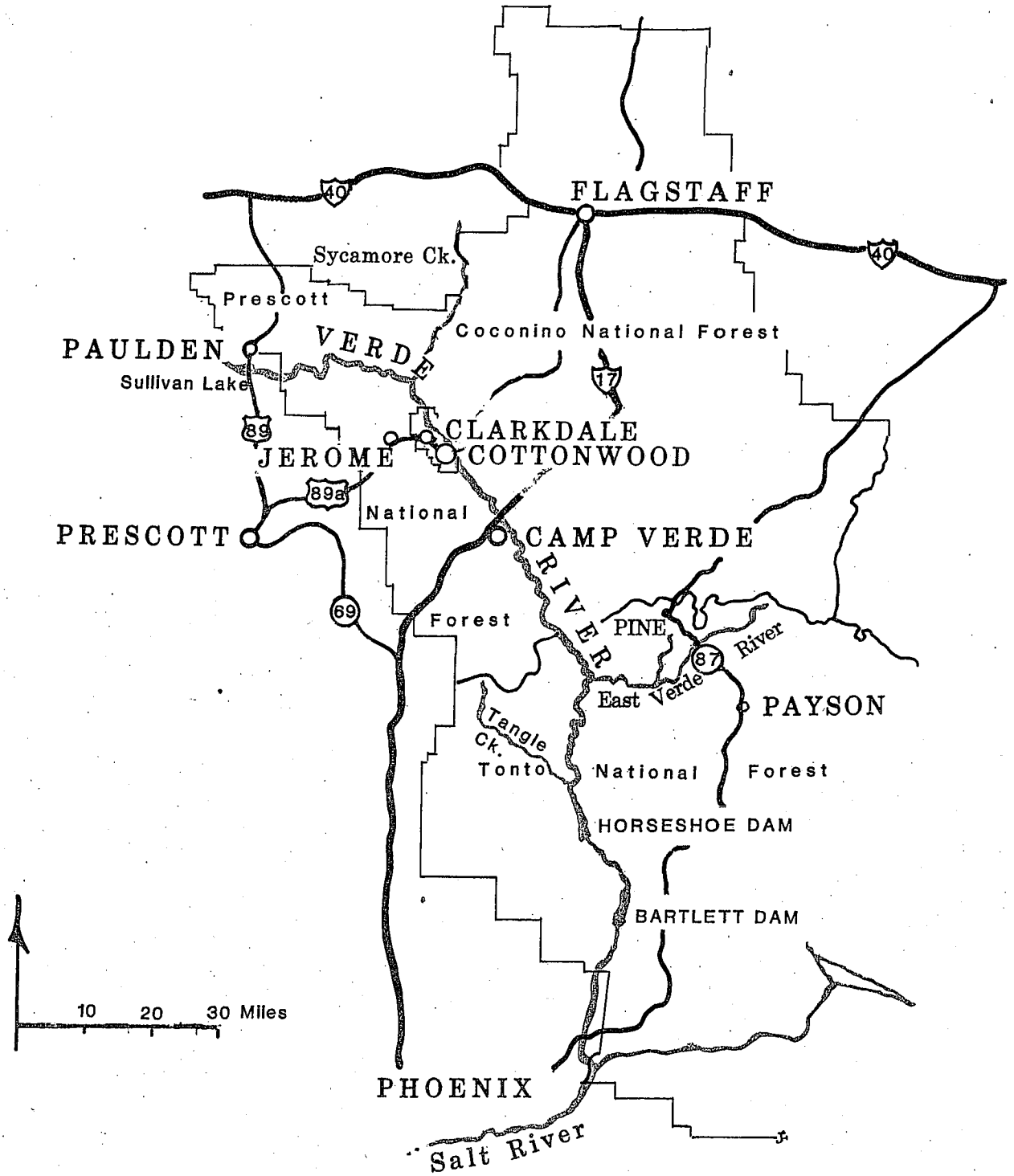


Figure 1 Location Map

I. INTRODUCTION

A. Background and Nature of Decision

In 1968, Congress passed the Wild and Scenic Rivers Act (P.L. 90-542) and redirected the water policy of this nation. Congress declared that:

> "....the established national policy of dam and other construction at appropriate sections of 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."

Over the past several years public interest has increased to protect the remaining free-flowing segments of several rivers in Arizona, as well as throughout the United States. With the passage of the National Parks and Recreation Act (P.L. 95-625), the Wild and Scenic Rivers Act was amended by adding 17 rivers for study. Among these was the Verde River.

> "The main stem from the Prescott National Forest boundary near Paulden to the vicinity of Table Mountain, approximately 14 miles above Horseshoe Reservoir, except for the segment not included in the National Forest between Clarkdale and Camp Verde, north segment."

Because the phrase "except for the segment not included in the National Forest between Clarkdale and Camp Verde, north segment" required some clarification, Staff from the Subcommittee on Energy and the Environment in the House of Representatives provided the following information:

> The legislative intent was to exclude from the study that segment of river from where it leaves National Forest lands north of Clarkdale, Section 33, T17N, R3E, downstream to where it again enters National Forest land near the southwest corner of Section 26, T13N, R5E.

In addition to the designated study segment, the section of river between Table Mountain and the junction of Tangle Creek in Section 35, T9N, R6E, was also evaluated for possible inclusion in the National Wild and Scenic Rivers System. The decision to add the Tangle Creek section to the study was made following a recommendation by the Central Arizona Water Control Study, that the dam site at the Verde River/Tangle Creek confluence be dropped because of unsuitable geology.

B. Purpose of Report

This report, prepared by the USDA, Forest Service, Prescott, Coconino, and Tonto National Forests, discusses the process used to analyze and evaluate characteristics of the study segment of the Verde River to determine whether it qualifies for designation as a Wild and Scenic River as defined in the 1968 Act. The public had an opportunity to comment on a preliminary decision published in a Draft Environmental Impact Statement (DEIS). A final recommendation based on the DEIS and subsequent public comment is documented in this Environmental Impact Statement. Congress directed that a report on the final recommendation be submitted to them not later than April 1981. At that point, Congress may accept or modify the recommendation when considering the Verde River for possible inclusion in the National Wild and Scenic Rivers System.

In addition to documenting the preferred alternative, the Wild and Scenic Rivers Act requires the report to show the following:

> Location (pg. 2); characteristics which do or do not make the area a worthy addition to the system (pg. 31); reasonably foreseeable potential uses of resources enhanced, foreclosed, or curtailed if designated (pg. 60); administering Federal agency if designated (pg. 67); cost sharing by State and local government agencies (pg. 67); and the estimated cost to the United States of acquiring easements, lands, and of administering the area if designated (pg. 51)."

C. Location

The Verde River originates in Big Chino Valley north of Prescott, Arizona, and is a major tributary of the Salt River, which flows into the Gila River.

The study area is divided into two river segments -- A and B. Segment A extends east from the National Forest boundary near Paulden, Arizona, to the north edge of the private lands in Section 33, T17N, R3E. Segment B extends south from the east edge of the private lands in Section 27, T13N, R5E to the junction with Tangle Creek in Section 35, T9N, R6E. The towns of Clarkdale, Cottonwood, and Camp Verde are located along the river between the two study segments. See maps on pages 14 and 15.

For the purpose of the study, boundaries were established to average about 1/4 mile on both sides of the river. With the exception of approximately 1,500 acres of private lands the study area encompasses National Forest lands. The river flows through Yavapai and Gila Counties.

D. Issues and Concerns

The primary issue emerging from public involvement is, "Should the Verde River and its immediate environment (study corridor), or portions thereof, be designated as a component of the National Wild and Scenic Rivers System or should present management direction continue." This question was raised during each public meeting as well as by the Wild and Scenic Rivers Act itself.

In addition, other issues and concerns, identified by the public, are addressed in this study. The issues include:

What effect would the wild and scenic river designation have on opportunities for future development, i.e., diversions, recreation sites, roads, and power transmission line corridors?

If the river and its environment (corridor) are designated, what would be the extent, provisions, and consequences of easements acquired on private land?

Are there possible conflicts between needs for more water storage and a designation which would maintain a free-flowing river?

What effect would a wild and scenic river designation have on habitat management for the bald eagle?

What effect would a wild and scenic river designation have on geothermal leasing, exploration, and development?

The concerns were:

What is the effect of wild and scenic river designation on rights and responsibilities regarding withdrawals for reclamation purposes?

Section 7(a) of the Wild and Scenic Rivers Act of 1968 prevents the Federal Power Commission, now the Federal Energy Regulatory Commission, from licensing any project directly affecting the river, and also prevents other Federal agencies from making construction loans or grants,

or issuing licenses for water resources projects.

What is the effect of designation on mineral prospecting, exploration, and development?

All prospecting, mining operations and other activities on mining claims which have not been perfected 1/ prior to adding the river to the system shall be subject to such regulations as the Secretary of Agriculture may prescribe to effectuate the purpose of the Wild and Scenic River Act. Also, 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 segment classified wild are withdrawn from all forms of appropriation under the mining laws and from operation of the mineral leasing laws.

Would the access for maintenance of stream gauging stations and development of additional gauges for an improved flood warning system be affected by designation?

Unobtrusive gauging stations and their continued maintenance are allowed under a wild and scenic river designation if there is no significant adverse effect on the natural character of the area.

If private landownership is retained, would road access through the classified area be allowed?

Rights of reasonable access to private land would not be denied. Road access through a designated area to private land would be allowed to the extent it does not significantly impact the natural character of the area.

1/ "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 carry on prospecting or mining operations and are consistent with such regulations as may be prescribed by the Secretary of Agriculture." (Wild and Scenic Rivers Act P.L. 90-542).

What effect will designation have on grazing of domestic livestock and development and maintenance of range improvements?

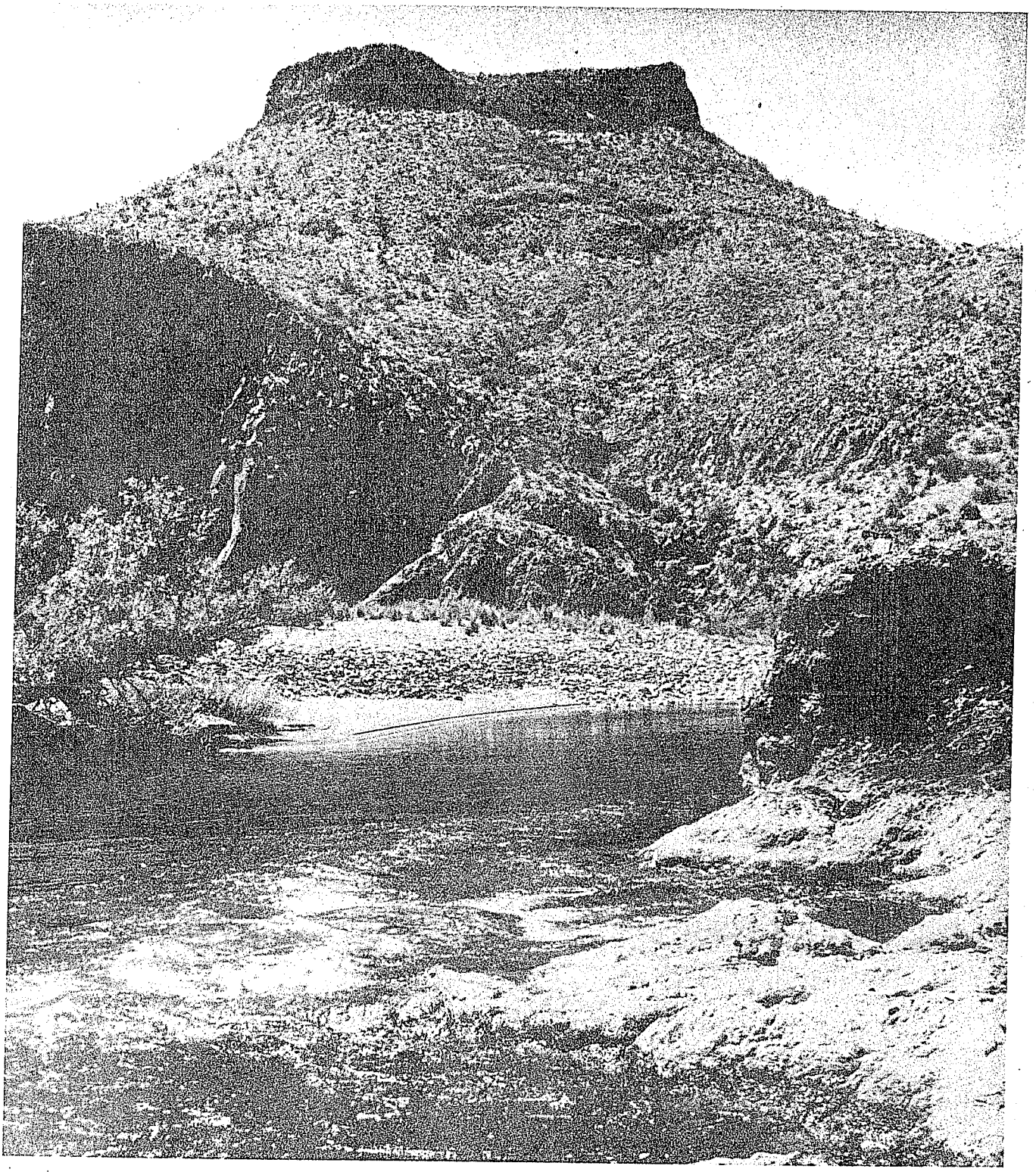
Livestock grazing would continue to the extent it does not detract from the values for which the river was designated and classified under provisions of the Wild and Scenic Rivers Act. Unobtrusive fences and other range improvements would be permitted if there is no significant adverse effect on the natural character of the area. Existing means of access for maintenance of improvements would be allowed to continue as long as they do not destroy the values for which the river was designated.

What is the effect on upstream communities and water users particularly as it relates to maintaining water quality and quantity standards of a designated river?

This concern was expressed by residents of upstream communities located outside of the study area. The Act specifies that the prescribed water quality standards will be maintained. However, this does not relieve the State of their water quality monitoring and enforcement responsibilities. Designation would add emphasis to maintaining the prescribed quantity of water required to maintain a free-flowing river.

What effect would designation have on existing manmade improvements?

Man-made improvements were inventoried during the study process, and their impacts on eligibility and classification were evaluated. Classification would not result in elimination of existing improvements.



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General view of the Verde River near Table Mountain-Tonto National Forest

II. AFFECTED ENVIRONMENT

A. Legal Setting

The Verde River flows through private and public lands. The public lands were set aside from the public domain as reserves prior to the Transfer Act of 1905. During the years that followed, there were several name changes, acreage transfers, etc., that resulted in the current boundaries of the Prescott, Coconino, and Tonto National Forests. Except for approximately 1500 acres of private lands contained in eight separate parcels along the river, the study area is managed by the U.S. Department of Agriculture, Forest Service. Since the Forest Service administers all the public lands, it has been designated as lead agency in conducting the study. Other Federal and State governmental agencies, as well as utility companies, statewide user groups, organizations and private individuals were consulted during the study process.

B. General Setting

The Verde River Study Area is located within the boundaries of the Prescott, Coconino, and Tonto National Forests. Management questions are currently being addressed within the framework of multiple-use guides established for the Chino Valley, Verde, Sedona, Beaver Creek, Payson, and Cave Creek Ranger Districts. General management has been directed toward maintenance of natural conditions along the river corridor.

Because of the rugged terrain and lack of products sought by early settlers, there has been little development or use within the study area. However, there has been and is now, grazing of cattle along the river and its tributary canyons. Some mineral exploration has occurred in the past. However, little evidence of mining activity is evident today. Fire occurrence is low, and recreation use is limited to camping, picnicking, fishing, hunting, and occasional river running during peak flow periods.

C. Socio-Economic Setting

The local users of the river are from the communities and towns of Bridgeport, Middle Verde, McGuireville, Jerome, Clarkdale, Cottonwood, Cornville, and Camp Verde. In general, these towns developed as service centers for ranching and mining areas surrounding the Verde Valley. The fertile soils adjacent to the river near the town of Camp Verde provided ample agricultural opportunities.

The profile of the valley today has changed considerably. It serves the tourism trade in Northern Arizona with nearby Jerome State Historical Park, Dead Horse State Park, Fort Verde State Park, Tuzigoot and Montezuma Castle National Monuments, National Forests and other scenic attractions, luring thousands of visitors yearly. Retail and wholesale trade is perhaps the largest single economic sector in the valley.

Besides attracting tourists, the valley has become a haven for retirees. The mild year-round climate is the major attractor. It is estimated that 20 percent of the Verde Valley's population is over 65 years of age. 1/

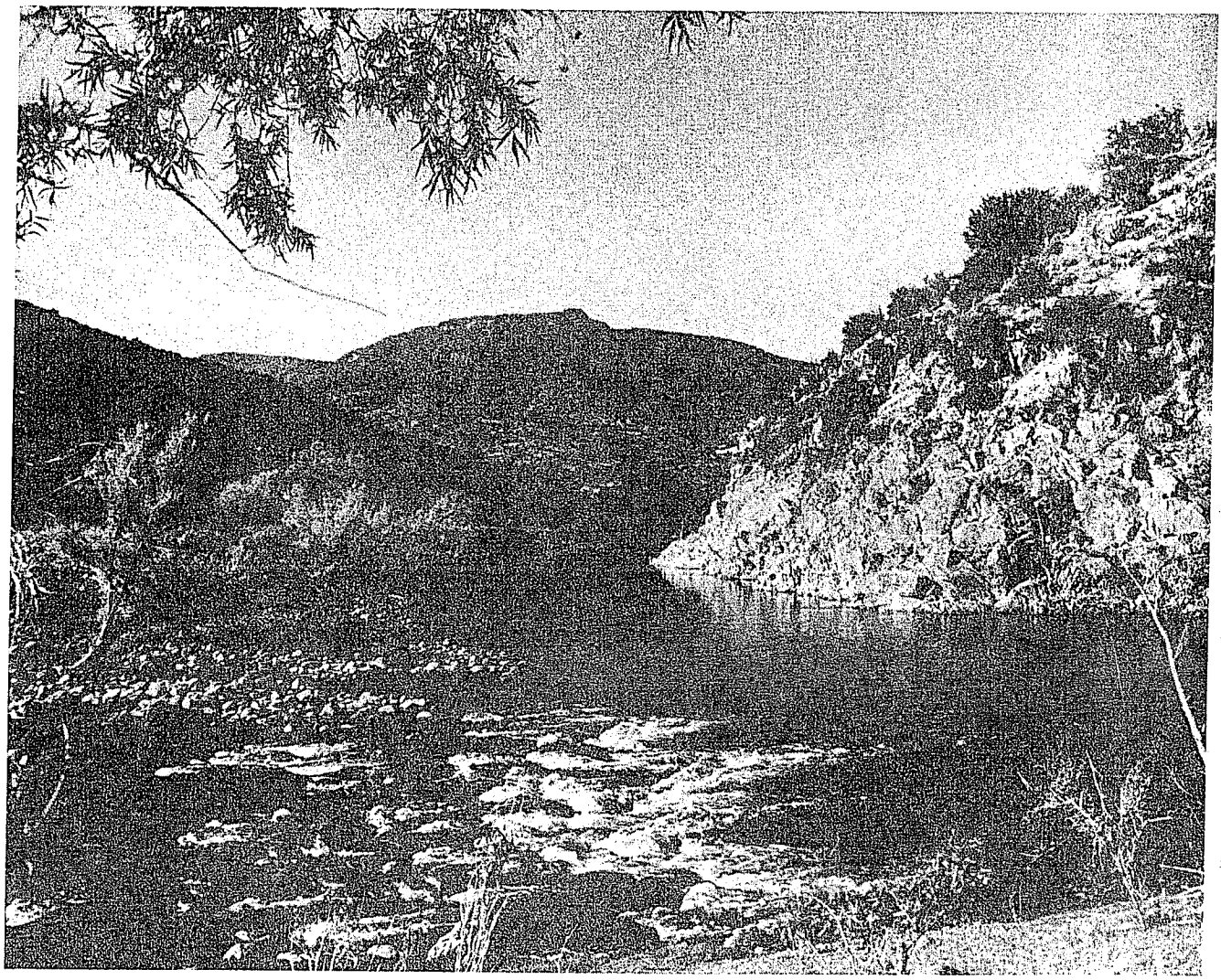
There are a few small ranches in the vicinity of the river that depend on National Forest lands for yearlong grazing. The river often provides the only reliable source of water during drought periods and plays an important part in the overall range management program.

The local economy is growing at a low to moderate rate. Mining activities are restricted to production of cement by the Phoenix Cement Company in Clarkdale and other small amounts of "deposited" type minerals - gypsum, dolomite, halite, etc. If Phelps-Dodge Corporation elects to open-pit mine the low grade copper deposits beneath the town of Jerome, there will be a rapid social and economic change in the Verde Valley.

The local public interest in National Forest lands, as well as the river, is quite high because the Forest provides a substantial part of their outdoor recreational needs. Generally, the Verde valley residents favor a full range of uses with a minimum of constraints, rather than land classification, which may preclude some existing or potential land uses.

The larger surrounding towns of Prescott, Chino Valley, Ashfork, Williams, Sedona, and Flagstaff, are not as dependent on the river for recreation as the local population. However, it does provide a variety when compared to their predominantly "high country" recreation use opportunities. The river also is an attraction for the residents of the Phoenix metropolitan areas and out-of-state visitors. This use is expected to increase if the river is designated in the Wild and Scenic Rivers System.

1/ Arizona Office of Economic Planning & Development - Phoenix, Arizona



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Verde River at the confluence of East Verde River-Tonto National Forest

D. Climate

The climate along the Verde River is characterized by hot summers, mild winters, moderate precipitation and abundant sunshine. Weather records have been maintained at Childs, Arizona, since 1915. The hottest temperature recorded at this site was 118°F in 1958. Normally, July is the hottest month, with the average daily maximum being 102°F. During January, temperatures sink to their lowest, with the average daily minimum being 33°F. The coldest temperature ever recorded was 2°F in 1937.

Precipitation averages approximately 16 inches per year (Sellers & Hill, 1974). Almost half is received between November and March as gentle rains, with much of the remainder falling during the summer thunderstorm period.

E. Cultural and Historical Background

The Verde River has long been known for its wealth of prehistoric and historic sites and played an important role in the development of Arizona. Six major divisions of this history can be made.

Paleo-Indian Period (12,000 B.C. to 8,000 B.C.) People of this era were primarily hunters who followed the movements of big game herds. Although no remains of this period have been verified, sites may be buried beneath alluvial and colluvial deposits.

Archaic Period (8,000 B.C. to A.D. 1) As the climate changed, the game herds died out, and people became more knowledgeable of other food resources, more emphasis was placed on the gathering of wild plant foods. Possible camp sites of this period are known and consist primarily of isolated projectile points and scatters of flaked stone.

Agriculturalists (A.D. 1 to 1425) Most prehistoric sites in the area date to this period. These valley inhabitants were known as the Southern Sinagua. Although probably developing from the earlier Archaic tradition, their culture was influenced by nearby groups. Earliest sites are pit house villages in the uplands, suggesting a hunting and gathering food base supplemented by farming areas along the Mogollon Rim. Later, pueblos in the open as well as cliff dwellings came into use, culminating in the large pueblos such as Tuzigoot and Montezuma's Castle.

Historic Hunters and Gatherers (A.D. 1425 to 1865) When the first Spanish explorers entered the Verde Valley in 1583, they found it occupied by the Northeastern Yavapai Indians. The Yavapai lifestyle was similar to that of the Archaic Period, being dependent upon a seasonal cycle of hunting and wild plant food harvesting. Some irrigation farming was also practiced.

The Pioneer Settlers (1865-1875) Farmers first entered the Valley from Prescott in 1865. Hostilities with the Yavapai Indians developed as increasing numbers of settlers moved into the Valley, disrupting the traditional Yavapai lifestyle by restricting access to food collecting areas. Fort Verde was established as a military base to control these conflicts and later became a reservation. The Yavapai Indians were moved out of the area in 1875 but returned to Fort Verde after 1898.

Miners and the Railroads (1875 to Present) In 1876, copper mines near Jerome that had been used in prehistoric times were rediscovered. In 1886, the Atlantic and Pacific Railroad was completed into Prescott. Ore could then be hauled by mule train from Jerome to Prescott, causing an economic boom in the Valley. When copper prices fell in 1891, the cost of hauling ore by mule became prohibitive. Consequently, a narrow gauge railroad from Jerome to Chino Valley was built and used until the smelter at Jerome was moved to a new site on the Verde River. This became the company town of Clarkdale. The Verde Valley Railroad was constructed in 1911 to connect Clarkdale with the Ash Fork-Prescott Railroad and is still used today.

F. Vegetation

The Verde River, as it meanders through the rugged terrain, creates a deciduous riparian forest and woodland subformation. The adjacent landscape beyond the river's influence consists of two distinct vegetative subformations. The pinyon-juniper woodland type dominates the river segment north of Clarkdale and gradually gives away to the Sonoran desert type with large inclusions of semi-desert grasslands in the segment south of Camp Verde.

The dominant plant species arrangement outside the riparian zone is a shrub overstory with a grass understory. Pinyon and juniper are often intermixed. The principal shrubby species are mesquite, catclaw, shrub oak, prickly pear, and creosote bush.

The dominant grasses include sand dropseed, three-awn species, galleta, blue grama, and sideoats grama.

The Verde River is virtually unsurveyed for threatened and endangered plant species. However, it is suspected that nine plants, that are listed or proposed for listing as threatened or endangered, exist in the study segments. See list in Appendix B of this document.

The riparian vegetation along the river is strongly influenced by physical features such as geology, channel width, and stream gradient which influence the existence of alluvial benches. Other factors which also affect the riparian vegetation are grazing and water level fluctuations due to seasonal flooding and withdrawals. Extrapolation of Forest Service research 2/ indicates that less than 20 percent of the river's length from the Forest boundary near Paulden, Arizona, to the Tangle Creek junction near Horseshoe Reservoir, is capable of producing quality riparian vegetation. The most productive sites are contained in the river segment between Beasley Flats and Tangle Creek.

As a general rule, the riparian areas are dominated by hardwoods and shrubs. The principal species are cottonwood, willow, ash, Arizona oak, hackberry, seepwillow, burrobrush, baccharis, desert willow, mesquite, salt cedar, and occasional Arizona sycamore. The herbaceous ground cover is primarily annual grasses and forbs with a high percentage of bermuda grass.

For the most part, the lands within the study area are rocky, steep and classified as not suitable for production of commercially valuable wood products. The minor amounts of Pinyon-Juniper available for fuelwood is used by the general public for recreation purposes.

G. Transportation

The study segments are not accessible by paved Federal, State, or County highways. However, US Highways 89, Alt. 89, and State Highway 79, provide access to county and Forest developed roads that serve the river. See river segment location maps on pages 14 and 15.

Access to both study segments of the river is limited. The two major problems are public access through private lands and substandard roads. Vehicle users can be separated into two major groups. The larger group consists of the general public seeking a recreation experience, and the second group is made up of range permittees, private landowners, and utility operators.

2/ Action Program for Resolution of Livestock - Riparian Conflicts on the Salt River and Verde River, July 5, 1979, US Forest Service.

1. River Segment A Access

There are five low standard dirt access roads in this segment. They are Morgan Ranch Road (FS #638), Bear Siding Road (FS #182), Verde Ranch Road (FS #635), Perkinsville Road (FS #354) and the Packard private lands access road (FS #131). These roads all pass through private lands within the study corridor. The Forest Service does not have rights-of-way or easements granting the general public access.

The Verde Ranch Road and Perkinsville Road can be driven by passenger cars. The other three roads usually require a high clearance vehicle. In addition to the listed major roads, there are several unconstructed trails and cross-country routes, that provide access to the rim above the river. Most of these require 4-wheel drive vehicles.

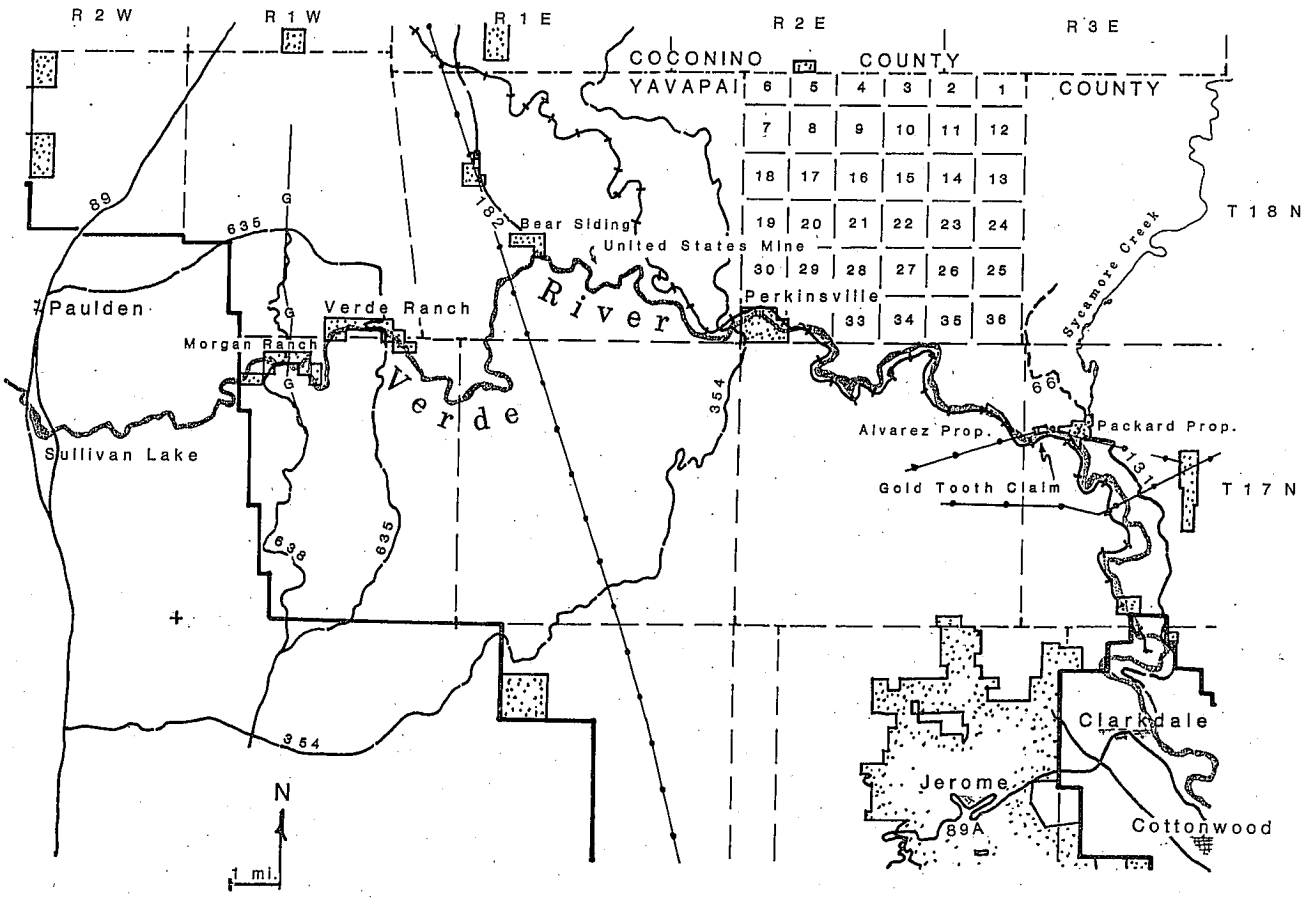
The Verde Valley Railroad enters the study corridor two miles west of Perkinsville. It remains in the corridor for 20 miles until it climbs out of the river bottom, between the Packard private lands and Clarkdale. The railroad was constructed in 1911 to connect Clarkdale with the main Ashfork-Prescott line. It does not carry passengers and generally makes one trip a day transporting cement from the Phoenix Cement Company in Clarkdale.

2. River Segment B Access

The north portion of this segment is accessible by six primitive dirt roads. They are Beasley Flats Road (FS #334), the Falls-Sycamore Creek Road (FS #500), Brown Springs Road (FS #574), Childs Access Road (FS #502), Powerline Road (FS #16), and 4-wheel Drive Road (FS #57). The roads are constructed to various standards, requiring high clearance and 4-wheel drive vehicles during wet conditions. Horseback and foot access to this section of the river is provided by Forest trails 41, 66, 67, and the powerline trail extending north from Childs.

The south section of this segment, from the junction of Fossil Creek to the boundary of the study area near Tangle Creek, is accessible by Forest Roads Nos. 269 and 479. Both roads join the river at the Sheep Bridge near the junction of Tangle Creek. Road No. 269 is constructed to the highest standard and provides primary access. Forest Trails 41, 11 and 20 provide the only other developed access to this portion of the river.

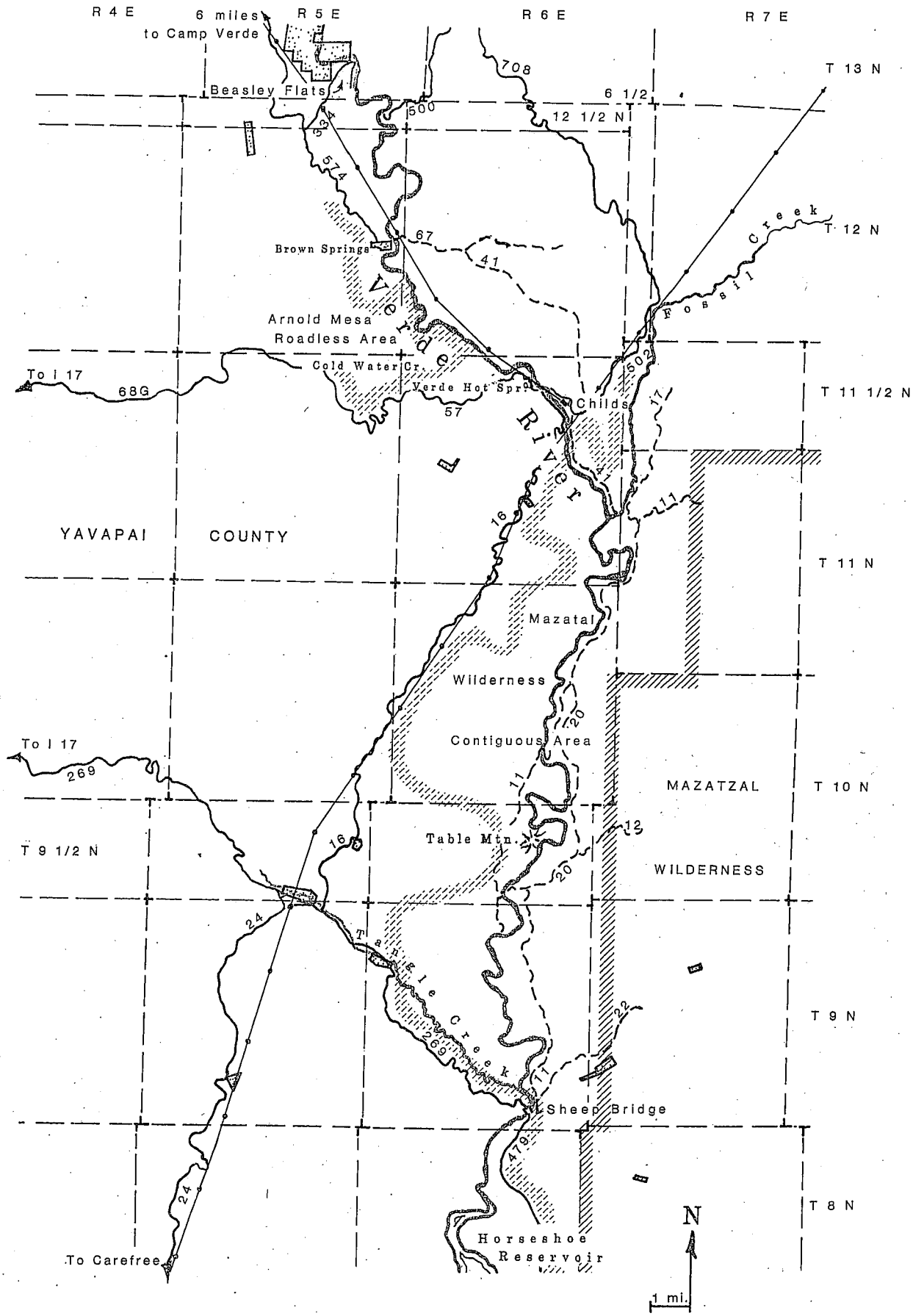
RIVER SEGMENT A

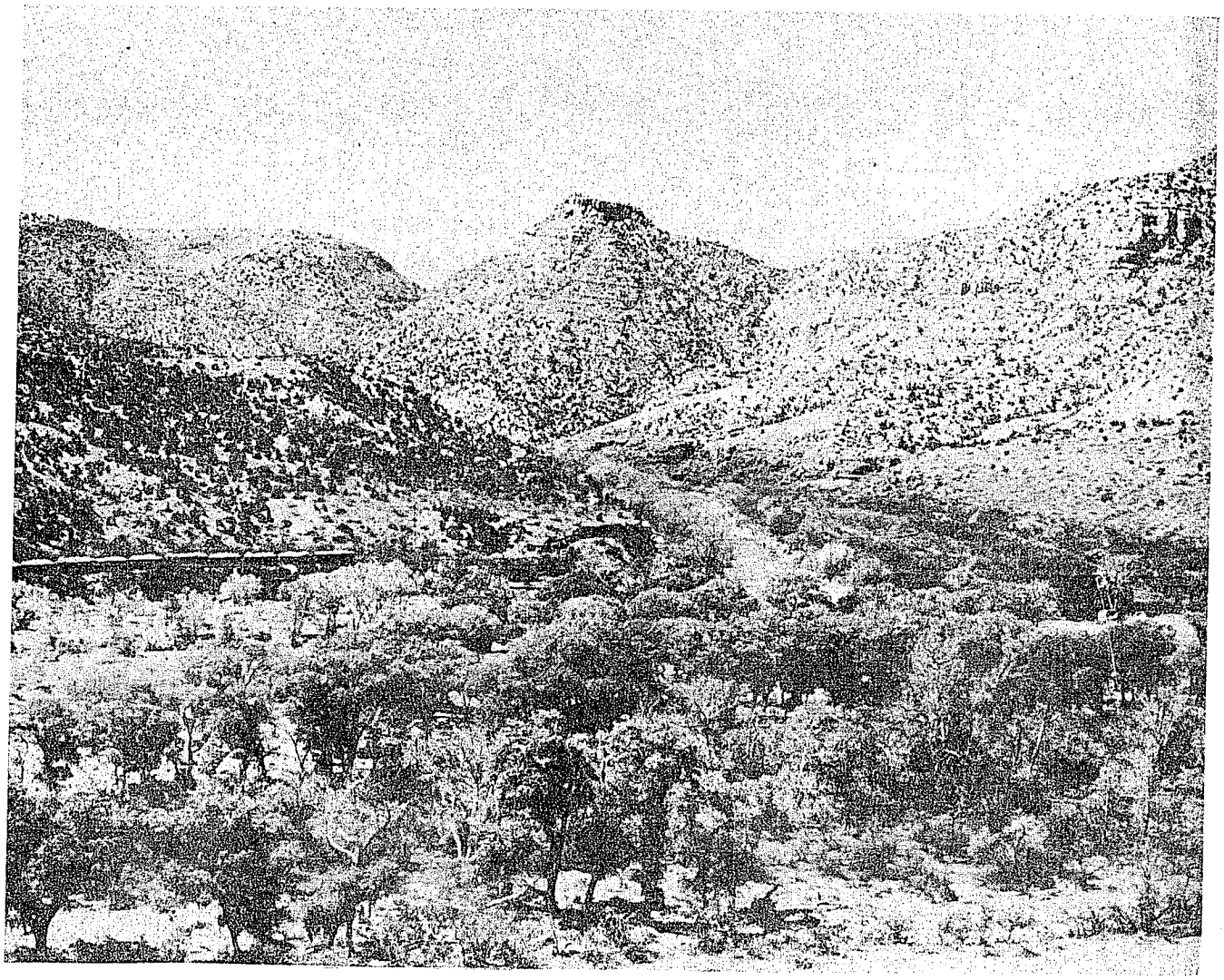


LEGEND

Road	635
Trail	51
Railroad	
Powerline	
Gasline	G
Land net	
Private land	
Forest boundary	

RIVER SEGMENT B





The Verde Valley Railroad was constructed in 1911 to connect Clarkdale with the Ashfork - Prescott Railroad and is still used today - Prescott National Forest.

H. Recreation

Since access to most of the Verde River within the study area is limited, recreation use is lower than on some other rivers in Arizona. The absence of developed recreation sites coupled with limited access, concentrates the recreation use around areas served by the few improved roads. Most of these roads were constructed to provide access to the private land parcels located along the river. This creates conflicts between the recreation users and private landowners.

The majority of the picnicking and camping occurs in river segment A, north of Clarkdale. The alluvial flats adjacent to the river provide the water, cover, and firewood necessary for these activities.

There are several areas in both river segments that have good fishing potential. Catfish is the most sought after species but other fish, such as largemouth and smallmouth bass, bluegill, and other sunfish are also harvested. Local residents visiting their favorite fishing hole account for most of the fishing use.

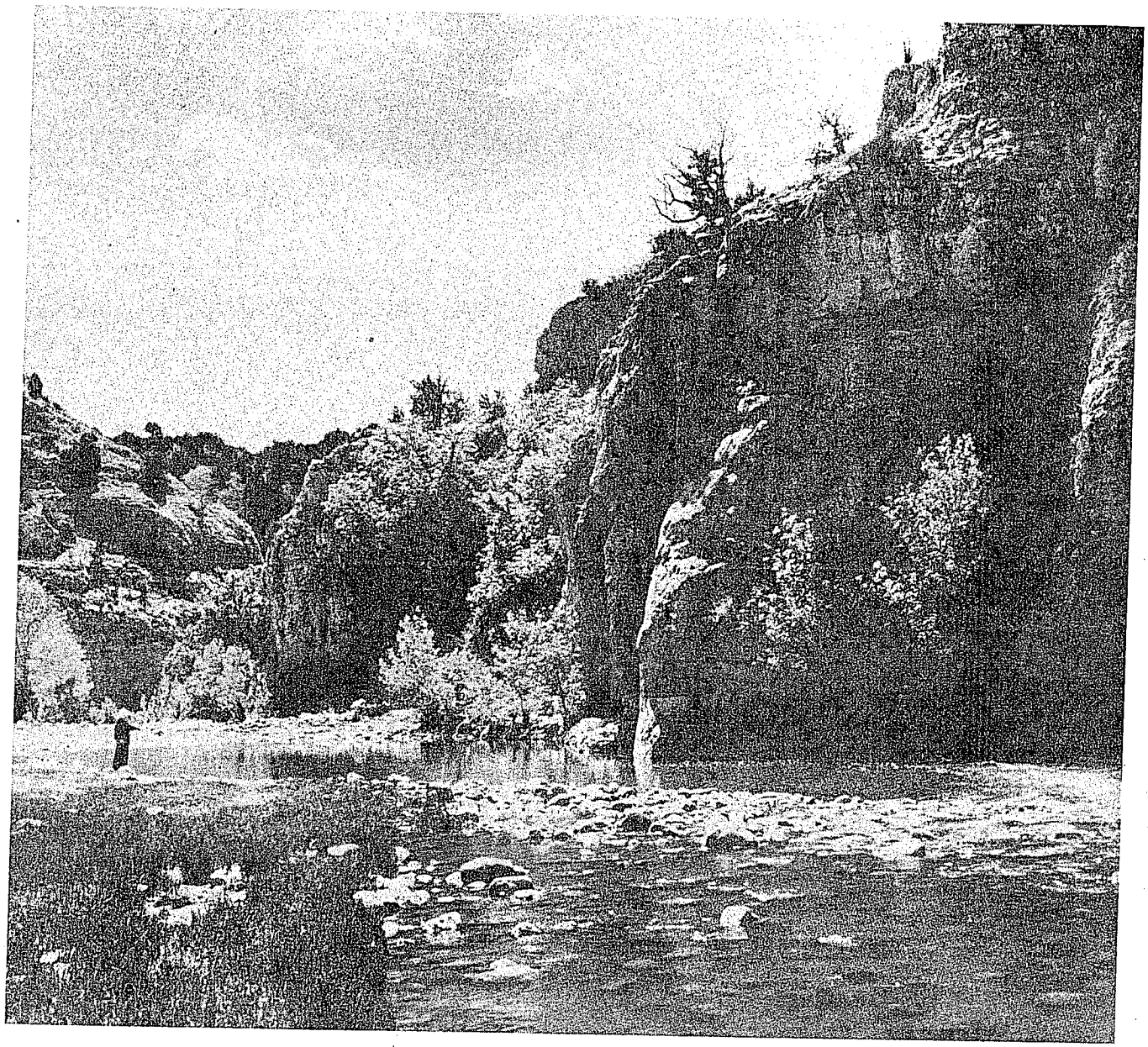
In general, hunting does not occur in the study area as frequently as in the more accessible surrounding area. Upland birds and ducks are the most popular game animals.

The river segment north of Clarkdale has limited potential for extended float trips. The average flow rate is less than 200 cfs and limits floating to innertubes, rafts, and occasionally short canoe trips.

The river segment south of Camp Verde has good potential for floating during the peak March-April flow period, but is often hazardous because of rapids and tree obstacles. Documented float trips 3/ indicate that when the flow is below 800 cfs there is trouble with sand and gravel bars and above 3,000 cfs the river is turbulent and dangerous. The average flow rate is less than 500 cfs.

There are a few popular swimming holes within the study area. The most popular area is the Verde Hot Springs. The springs are surrounded by the remains of a twenty-room, two-story lodge and spa that operated under a Forest Service special-use permit. Although the resort building was destroyed by fire in 1962 and the special-use permit terminated, the hot springs still draw large crowds.

3/ W. G. Weinel, U.S. Forest Service, 1973 and 1975.



©James Cowlin, 1980

Fishing along the Verde River west of Perkinsville private lands - Prescott National Forest

The recent RARE II 4/ process identified five roadless areas that extend into the study area. The Muldoon, Hackberry, and Sycamore Canyon Wilderness contiguous areas were recommended for resource management other than wilderness. The Arnold Mesa and Mazatzal Wilderness contiguous areas were recommended for further planning and will remain essentially undeveloped until Forest Land and Resource Management Plans 5/ are completed.

The Arnold Mesa roadless area begins approximately .5 miles south of Brown Springs below Camp Verde and extends 4 miles down river to the vicinity of Cold Water Creek. It is located entirely on the west side of the river. The Mazatzal Wilderness contiguous area begins approximately .5 miles south of Childs and includes both sides of the river down to the junction of Tangle Creek for a distance of 20 miles. See map on page 15.

I. Water

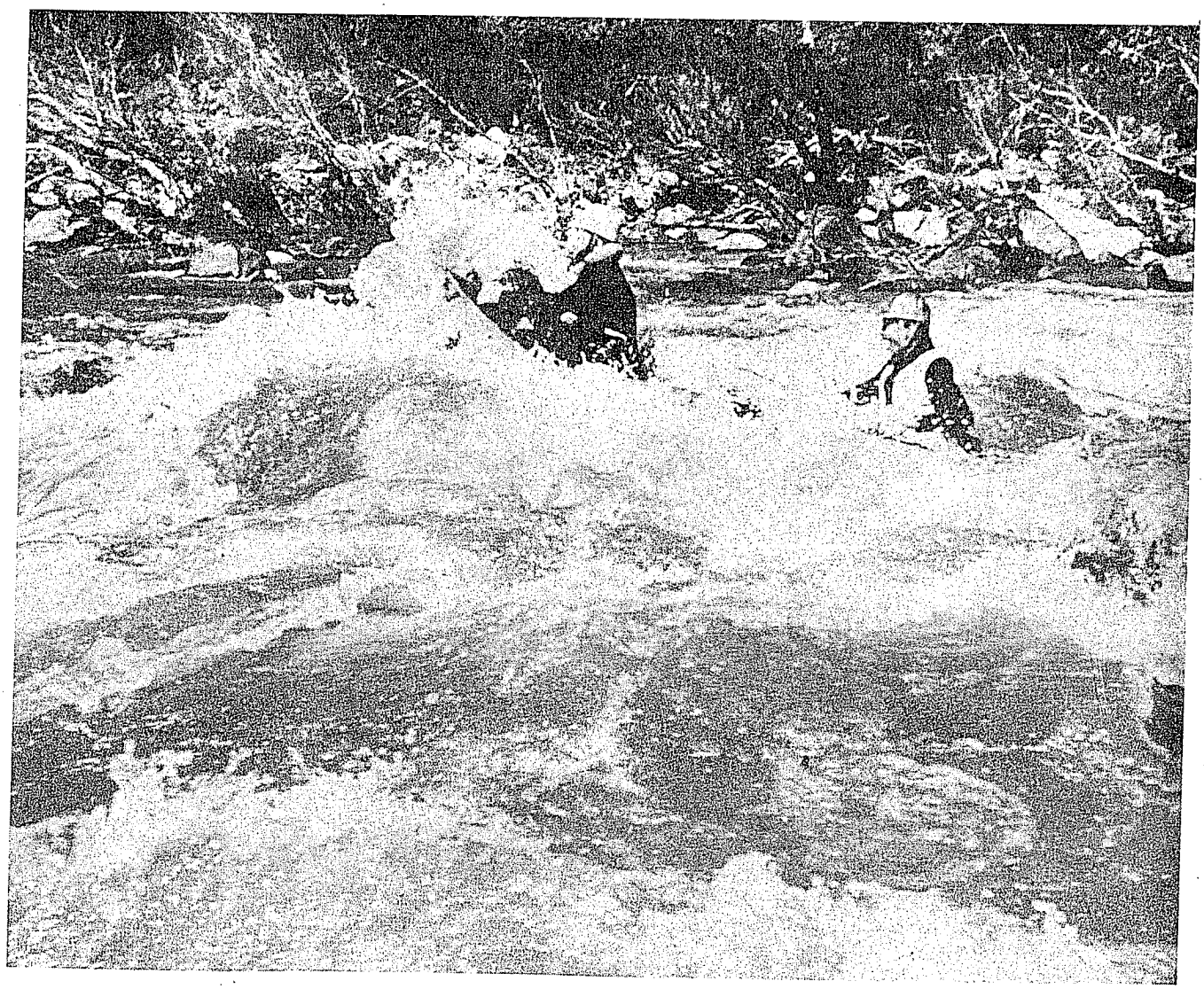
The Verde River originates outside the study area in Big Chino Valley northwest of Prescott. From its origin, it flows generally south, 125 miles through State, private, and National Forest lands. The river empties into Horseshoe Reservoir and Bartlett Lake, where it is stored for use downstream in the Phoenix metropolitan area. The major tributaries are Sycamore Creek (north of Clarkdale), Oak Creek, Beaver Creek, West Clear Creek, Fossil Creek, and the East Verde River.

Water quality samples collected by the U.S. Geological Survey above and below Camp Verde do not represent a complete testing program. However, they do indicate the water inside the study area meets the standards set by the State of Arizona for recreation, wildlife, fisheries and agricultural uses. 6/

4/ The Roadless Area Review and Evaluation process (RARE II) is a comprehensive process, instituted in June 1977, by the Forest Service to identify roadless areas and undeveloped land areas in the National Forest System and to determine their general uses for both wilderness and other resource management and development.

5/ Forest Management Plan required by Section 6 of the National Forest Management Act of 1976 (P.L. 94-588).

6/ U.S. Geological Survey Water-Data Reports.



Spring river running of the Verde River at 4,000 cubic feet per second - Tonto National Forest

The U.S. Geological Survey maintains four gauging stations on the Verde River. The maximum, minimum, and average discharges are as follows:

TABLE 1

Station	Years	Maximum (cfs)*	Minimum (cfs)*	Average (cfs)*
Paulden	1963 to Present	8,080	15	35.7
Clarkdale	1915 to 1921 & 1965 to Present	50,600	55	187
Below Camp Verde	1971 to Present	41,000	13	378
Tangle Creek	1945 to Present	91,400	61	489

* (cfs) - cubic feet per second.

The maximum flows usually occur during spring and winter months. The minimum flows are recorded during dry summer months.

There are no diversions, dams or other waterway modifications in river segment B. However segment A, north of Clarkdale contains three sets of diversions. The uppermost of the diversions lies in Section 31, T18N, R2E (Perkinsville private lands). The structure consists of a windrow of rock and earth extending into the stream channel, forcing water into the irrigation system by gravity flow. The second diversion is similar in construction to the first and is located in Section 12, T12N, R2E (Alvarez private lands). It provides water for agricultural purposes and serves a pasture permitted by a special-use permit on National Forest lands. The third diversion is located in T17N, R3E, Section 33, just inside the study area. The water, which is used for irrigation, is diverted out of the river into a ditch which leads to a private land parcel. These diversions do not affect the free-flowing character of the river.

That portion of the river not designated for study between Clarkdale and Camp Verde (Verde Valley) contains, or is subject to, numerous agricultural and domestic diversions. Water is drawn from the river by direct diversion and wells. It is partially consumed in agriculture and domestic use, yet a

portion of what is diverted is also returned to the river but is delayed, by routing through irrigation systems.

The water rights on the Verde River are in the process of adjudication. Until adjudication is complete, no positive statement can be made about water rights. See Appendices C and D.

Northern Arizona communities, including Prescott, Pine, Payson, and Camp Verde and other Verde Valley communities have been tentatively granted a share of Colorado River water when the Central Arizona Water Project (CAP) is completed into Arizona. Salt River Project (SRP) currently claims all unappropriated Verde River water. Some of these communities have expressed an interest in exchanging their CAP allocation to SRP for Verde River water. This could result in water being removed directly from the Verde River or its tributaries. However, since the CAP project will not be completed until approximately 1987, it is impossible to determine what affect this exchange of water rights will have on the river.

J. Fish and Wildlife

The riparian community and the river itself provide niches for over 60 percent of the vertebrates that inhabit the three National Forests involved in this study. For example, 255 of the 383 vertebrates known to exist on the Prescott National Forest can be found along the river and its immediate environs. Many of these animals reproduce and complete their entire life cycles in the same community. Others use the river for reproduction and/or feeding, but seasonally. Still others use the unique riparian zone as a highway for travel from summer to winter areas and return.

The river provides valuable winter waterfowl habitat. The low elevation promotes ice-free conditions which encourage use by migratory birds during January and February. Also, the year-round climate is such that a few waterfowl take up yearlong residence.

Little is known about the furbearer population. The species known to occur throughout the river influence zone are beaver, coyote, bobcat, weasel, skunk, and raccoon. River otters, listed by the State as endangered, are native to the system, but have disappeared. The Arizona Game & Fish Department is currently considering the feasibility of re-establishing the otter in the study area.

The primary game species inhabiting the area, but are not dependent on the riparian habitat, are mule deer, white-tail deer, javelina, morning dove, quail, and cottontail rabbits. Occasionally, a mountain lion or black bear will be observed passing through the area.

The water quality for river segment A north of Clarkdale rates high. A limited sample, taken near the Packard Place by Forest Service personnel in 1974, indicated that dissolved oxygen was at or close to saturation and water temperatures were well within the range to sustain a warm water fisheries. Dissolved solids, a good indicator of pollution, was well within the range necessary for supporting a good mixed fish population. Bottom fauna collected during the study also indicated good water quality.

River segment B south of Camp Verde is expected to be somewhat lower in quality than segment A, due to urban development. The towns of Clarkdale, Cottonwood, and Camp Verde are situated on the banks of the river and are suspected of contributing pollutants into the system. The extent of the pollution problem is not known at this time. However, a special task force has been assigned by the Northern Arizona Council of Governments (NACOG) under the 208 Water Quality Program to study and propose solutions to existing and projected future quality problems.

There are 25 species of fish known or suspected to occur in the study area. Of these, 14 species are big enough to be caught on a hook and line. The most popular game fish are catfish, bass, bluegill and other sunfish. Suckers and carp are sought by some people but usually are caught incidental to fishing for other species.

The entire Verde River and one-quarter mile on both sides has been identified 7/ as essential habitat for bald eagles. The bald eagle is listed as an endangered species on both the State and Federal lists. Bald eagles nesting north of Arizona use the river for wintering, and a local population of bald eagles use it for nesting and rearing young during the spring and summer.

7/ Action Program for Resolution of Livestock - Riparian Conflicts on the Salt River and Verde River, July 5, 1979, US Forest Service.

The Verde River provides nesting sites and foraging areas for the bald eagle.

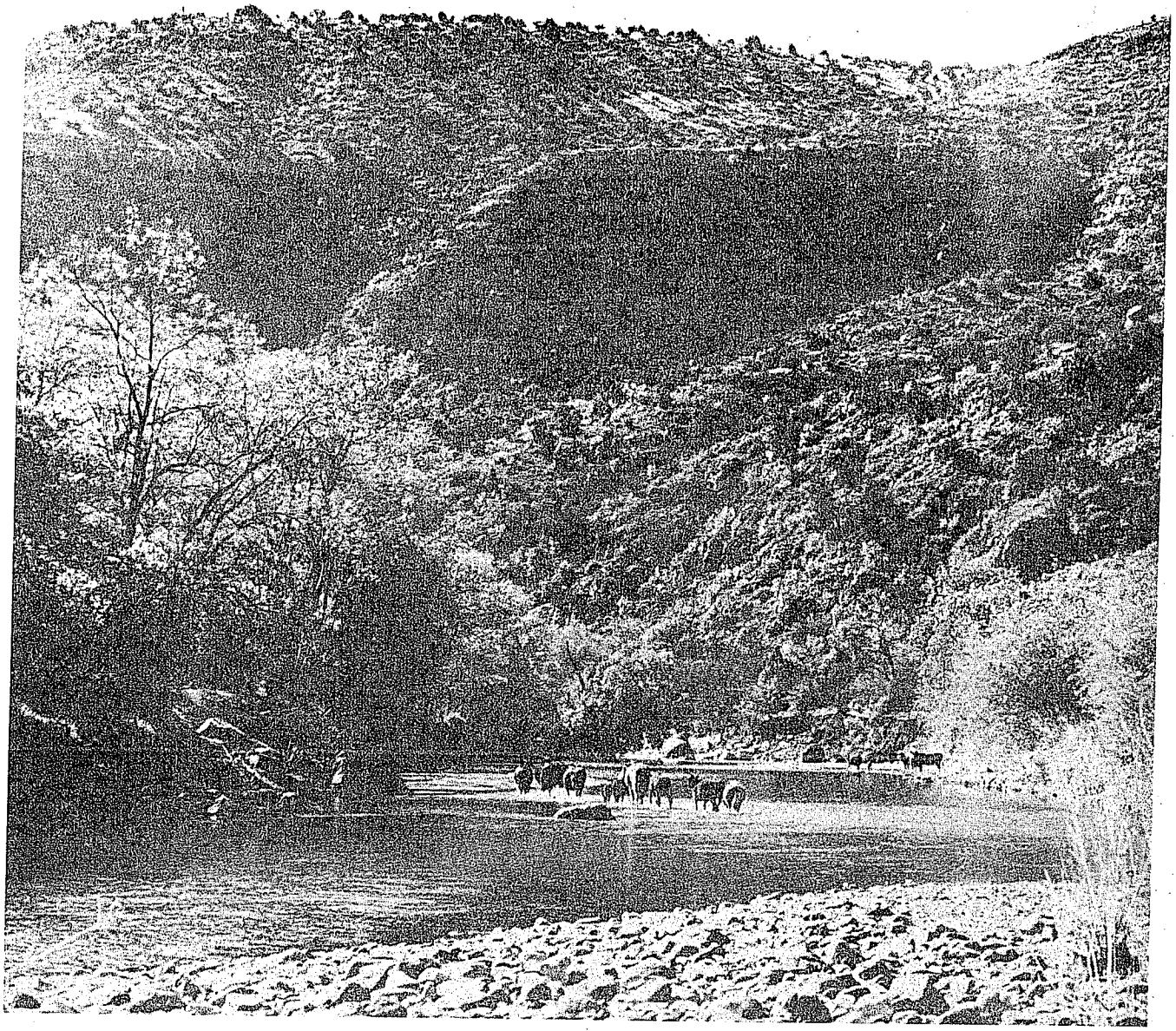
There are only 13 known active nesting territories in Arizona and New Mexico. The nesting birds tend to require the river environs more than the wintering birds. Observations and studies indicate the southern segment of the Verde River is used for nesting, and the total length is used for winter foraging. During the winter period, the eagles have been observed as far as eight miles from the river canyon.

Many wildlife observers are of the opinion that regeneration of cottonwood and other riparian hardwood trees along the Verde River essentially ceased with the advent of unrestricted cattle grazing about a century ago. The existing trees are nearing the end of their natural life span and attrition by death, floods, etc., is occurring at an alarming rate. This situation concerns many wildlife managers and observers who feel that the bald eagles prefer trees to cliff sites for nesting. The same managers and observers are quick to point out that cliff sites are unsuitable alternatives to trees because of reduced fledgling survival. Trees are also important as streamside foraging perches for capture of fish, the primary food source for the eagles.

The Forest Service has been aware of the importance of the riparian habitat along the Verde and other rivers for some time. However, only in comparatively recent times has the probable adverse effect on the bald eagle been of concern. In 1978, the Maricopa Audubon Society contacted the Forest Service and expressed their concern that the eagle habitat was not being adequately protected and managed. As a result, the Forest Service developed a position statement and proposed to proceed with a short-range program of direct habitat improvement in areas crucial to the nesting pairs accompanied by a longer term program of range management designed to improve the entire riparian resource on the Verde River. The short-range program consists of excluding livestock in selected areas, fencing of key areas and planting cottonwood cuttings. The Audubon Society has endorsed both the short and long-range programs.

In addition to the bald eagle and river otter, the Verde River and its immediate environs provide suitable habitat for 16 other threatened, endangered or special interest 8/ wildlife and fish species. See species list in Appendix A.

8/ Special interest includes wildlife species listed by the State of Arizona that are in danger of being eliminated, may be in jeopardy in the near future, or because of limited distribution within the State.



The Verde River is an important source of water for livestock.

K. Range

Since the introduction of grazing, the Verde River has served as a primary watering and foraging source. As a result, the River and the adjacent bench lands have been areas of livestock concentration. This use, coupled with the physical nature of the river corridor (climatic and edaphic), has somewhat changed the ecology of the area.

Parts of 18 National Forest grazing allotments occur within the study area. Administration limitations, resulting from financial and/or personnel constraints, have produced management variations between the allotments. The overall net result is that the grazing resource is not being managed to its potential; thus adversely impacting other resources, uses, and activities.

Range improvements consist of allotment boundary and pasture division fences, water gaps 9/, corrals, tractor constructed cattle trails, and salt grounds. A range headquarters is maintained on National Forest lands north of Childs. These improvements are permitted by a special-use permit and consist of a bunkhouse, barn, and corral. They are used in management of the Skeleton Ridge grazing allotment.

Along river segment A, north of Clarkdale, there are 17 water gaps located on both Forest and private lands. They are seldom all in place at the same time and present a minor hazard to river runners.

The Forest Service is currently implementing a program to resolve an apparent conflict between livestock grazing and the riparian habitat along the Verde River. The alternatives range from complete removal of livestock to partial exclusion of grazing by fencing key areas and scheduled utilization under an approved management plan.

L. Minerals

Most of the Federal lands located in the study corridor between Mormon Pocket (Sec. 3, T17N, R2E) and the junction of Tangle Creek are withdrawn from mineral entry by Reclamation Withdrawals. There are no known mineral production sites within the river section between Mormon Pocket and the west Prescott National Forest boundary, which is open to mineral entry.

9/ Fences across the river that break away during periods of high water flows.

Prospecting has shown a very limited amount of base metals within or adjacent to the study area. Numerous non-metallic discoveries have been made within three miles of the river; however, only one quarry is located inside the study area and it is presently inactive.

The area from Camp Verde to Bear Siding forms the southern boundary of lands determined as prospectively valuable for oil and gas. The rest of the study area is not considered valuable for oil and gas.

Verde Hot Springs currently produces surface hot water, and U.S. Geological Survey reports show that water as hot as 120°C could exist at depths of 6,000 feet. These reports indicate the Verde Hot Springs area has very little potential for electrical power generation, but the area has potential for direct use of the geothermal resource. 10/

M. Air Quality

The air quality over the Verde River is good 11/. The largest single pollutant in the general area is dust which is largely the result of wind erosion from relatively undisturbed areas and vehicular travel along the low standard dirt roads.

The large metropolitan area of Phoenix, Arizona, is located approximately 40 miles south and west of the extreme south end of the study corridor. The prevailing southwest winds bring some smog into the general vicinity of the river. However, seldom can it be visually detected within the study area.

Future expansion of mining activities in the Jerome area would increase the probability of contaminants reaching the study area. Also, improvement of the unpaved roads adjacent to the river may result in increased traffic and related dust.

N. Landownership, Restrictions, and Uses

The Verde River flows through Yavapai and Gila Counties. All the private lands within the study area are located in Yavapai County.

10/ State of Arizona, Bureau of Geology and Mineral Technology.

11/ Arizona Department of Health Services, 1978.

TABLE 1a

SUMMARY OF OWNERSHIP, RESTRICTIONS, AND USES

River Segment A

1.	Length of Segment	38.5 miles
2.	Gross Acres in Study Area	12,320 acres
	Acres Under Forest Service Administration	10,846 acres
	Acres in Private Ownership	1,474 acres
3.	Number of Privately Owned Parcels 1/	94
4.	Number of Private Landowners	11
5.	Land Uses in Study Area	
	Gas Pipeline 2/	1 crossing
	Railroad 2/	20 miles
	Power Transmission Lines 2/	4
	Water Diversions 2/	3
	Special Use Pastures 2/	2
	Storage Yard 2/	1
	Water Gauging Stations 3/	2
	Reclamation Withdrawal 4/	1
	Water Gaps (Fences) 2/	17

River Segment B 5/

1.	Length of Segment	50.0 miles
2.	Gross Acres in Study Area	16,000 acres
	Acres Under National Forest Administration	15,974 acres
	Acres in Private Ownership	26 acres
3.	Number of Privately Owned Parcels	1
4.	Number of Private Landowners	1
5.	Land Uses in Study Area	
	Power Transmission Lines 2/	3
	Range Headquarters 2/	1
	Water Gauging Station 6/	1
	Reclamation Withdrawal	Total Length
	Childs Power Plant 7/	1

1/ These parcels vary in size from a large 446 acre tract down to small lots.

2/ Authorized by special use permit or easement.

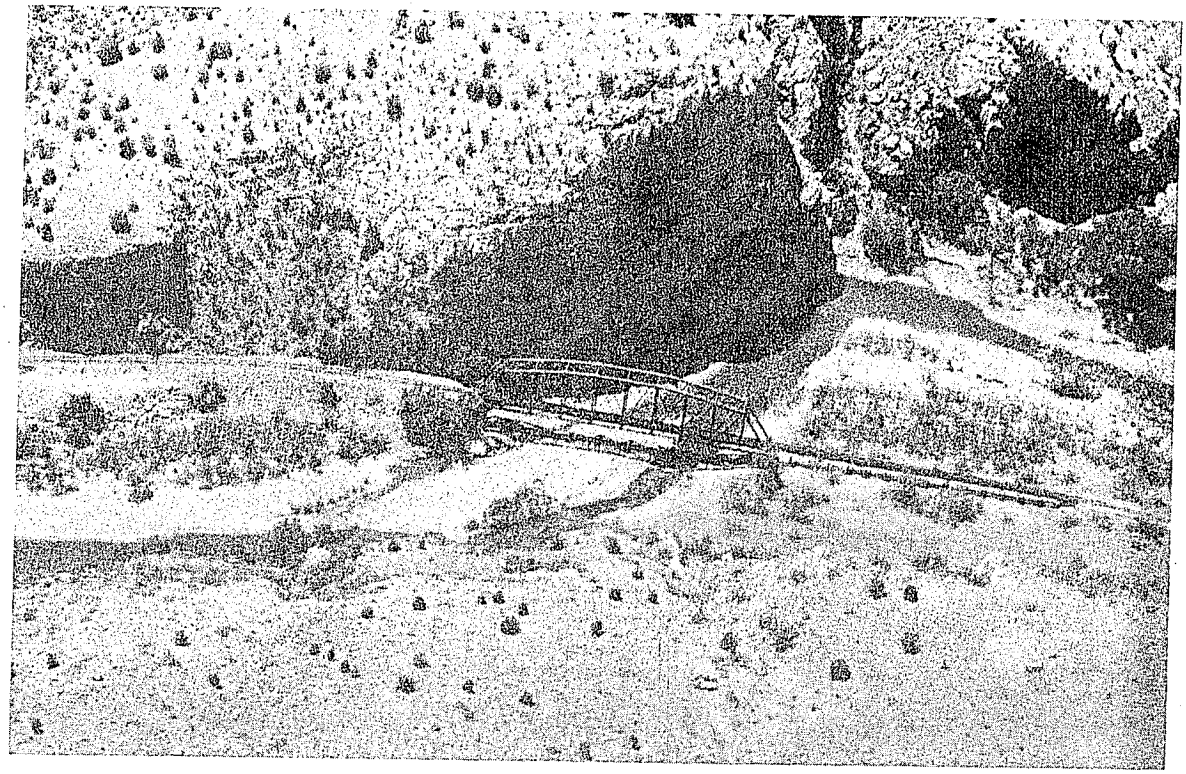
3/ Both gauging stations have access roads.

4/ The east 1/2 of T17N, R2E and the west 1/2 of T17N, R3E have been withdrawn for waterpower development purposes.

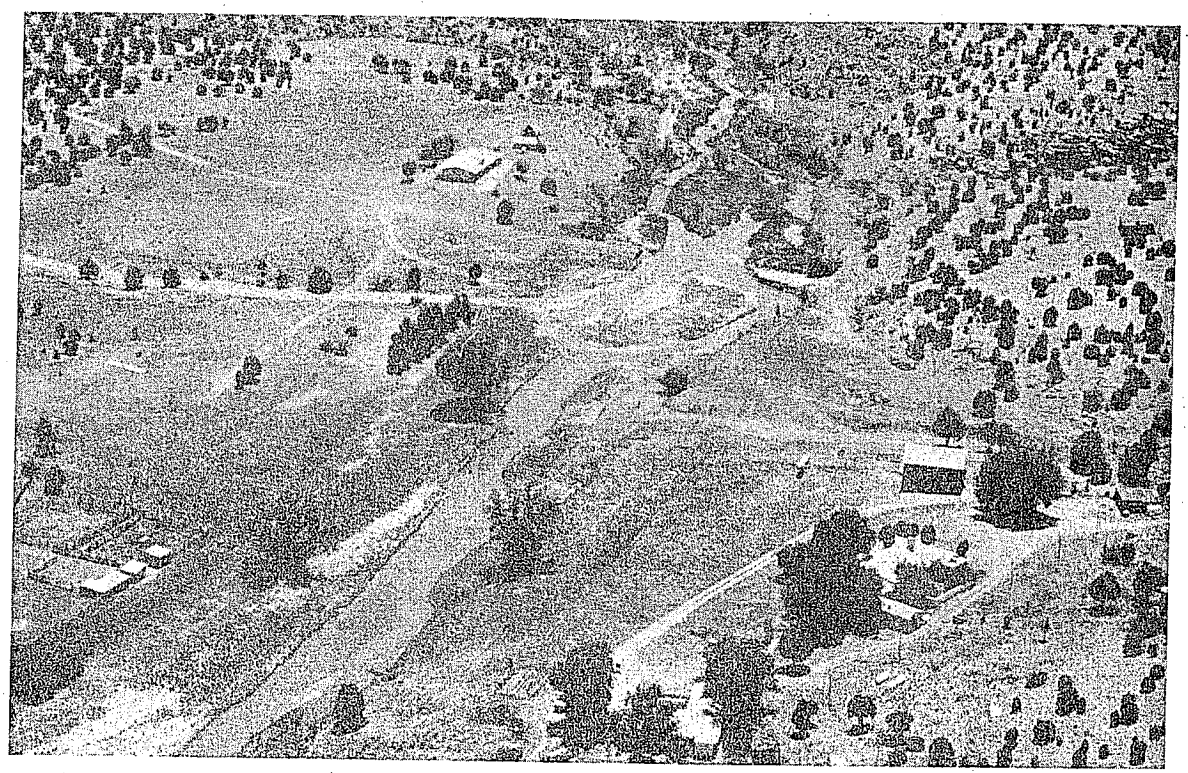
5/ Includes 10.5 mile river section between Sheep Bridge and Table Mtn.

6/ This water gauging station is maintained by helicopter.

7/ The powerhouse and appurtenant facilities are located within the study area. The water is diverted out of Fossil Creek, a tributary of the Verde River. No water is diverted out of the Verde River for power production.



Verde Valley Railroad crosses the Verde River on the east side of Perkinsville private lands - Prescott National Forest.



Ranch headquarters located in study segment A of the Verde River - Prescott National Forest

III. EVALUATION CRITERIA

A. Eligibility Criteria and Analysis and Determination

The first step in the study process is to determine if the river is eligible for inclusion in the National Wild and Scenic Rivers System. In order to make this determination it is necessary to understand Section 1(b) of the Wild and Scenic Rivers Act (Public Law 90-542) which states that:

> "It is hereby declared to be the policy of the United States that 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."

To evaluate whether the river is outstandingly remarkable, eligibility criteria were written to reflect the intent of the Wild and Scenic Rivers Act as it applies to streams in Arizona below the Mogollon Rim, an area which includes the Salt, San Francisco, and Verde Rivers. These criteria are definitions of the terms "outstandingly remarkable" scenic, recreational, geologic, fish and wildlife, and historic and cultural values.

Because this evaluation can be highly subjective, the evaluation criteria were reviewed and modified at a public workshop. The accepted criteria are as follows:

1. Scenic Value:

Landform - terrain highly varied and distinctive, may include vistas with sharp peaks and/or sharply serrated ridges or isolated peaks with distinctive color contrasts, deep canyons or distinctive gorges with vertical or near vertical walls and/or unusual configuration or color.

Vegetation - highly varied distinctive with strongly defined patterns formed by combinations of vegetative communities, dramatic displays of seasonal color; specimen stands of vegetation which may create unusual forms, colors or textures. Outstanding examples of threatened and endangered plants or native riparian habitat are present.

Water - Natural waterforms consist of rivers and streams of a perennial nature (consistent flow), river or stream

character varies from still pools or slow moving water to waterfalls, cascades and rapids and may have unusual channel configuration.

2. Recreational Value: Variety of uses is high or numerous; river is accessible to wide variety users; quality of recreation is high and use is commensurate with values; significance of the recreational opportunity extends at least statewide and may be regional or national.

3. Geologic Value: Formations and structures carved by wind and water erosion are unusual and worthy of study and observation, they are unusually old or show many periods and variety or unusual geological features, e.g., fossils, faults, etc., and either rocks are rare or uncommon, or exposed minerals are unusual or distinctive, or outcrops are colorful and of different forms or shapes.

4. Fish and Wildlife Values: Fish populations are self-sustaining and abundant, distinctive or highly visible; threatened and/or endangered species are self-supporting, isolated species are found away from their main geographic ranges, wildlife and fish communities show unique associations, symbiosis, competition or unusual food chains, abundance and/or variety of wildlife and/or fish is unusual for the area.

5. Historic and Cultural Values: Sites are easily viewed or interpreted, are geographically important; show distinct characteristics of time period, construction or workmanship, are associated with significant events in the nation's, state or local history or pre-history.

In addition to the eligibility criteria written in response to the Wild and Scenic Rivers Act, there are four criteria contained in the "Guidelines for Evaluating Wild, Scenic and Recreational River Areas---" written by the U.S. Department of Agriculture and the Interior in 1970. They are:

1. Free-Flowing River: The river must be in a free-flowing, natural condition.

2. Meaningful Experience Opportunity: The river must be long enough to provide a meaningful experience for river users.

3. Water Volume: The river should contain sufficient water volume to permit, during the recreation season, full enjoyment of water-related outdoor recreation activities generally associated with comparable rivers.

4. Water Quality: Water quality should meet the criteria for fish, other aquatic life, and wildlife as defined in the chapter on Aesthetics - General Criteria of Water Quality Criteria, Federal Water Pollution Control Administration, April 1, 1968.

The study team, when applying the first five eligibility criteria definitions, considered that if one or more elements of each criteria definition applied, the river then had outstandingly remarkable attributes for that particular criteria. The application of these criteria to the study segments of the Verde River led to the determination that the two segments are eligible for inclusion in the National Wild and Scenic Rivers System. The two segments meet three of the eligibility criteria for "outstandingly remarkable" values and also meets the four additional criteria. Table 2 is an analysis of the criteria as they apply to the Verde River Study Segments.

TABLE 2
SUMMARY OF CRITERIA SATISFACTION

Criteria	Criteria Satisfied
Scenic Value	Yes
Recreational Value	No
Geologic Value	No
Fish and Wildlife Values	Yes
Historic and Cultural Values	Yes
Free-flowing River	Yes
Meaningful Experience Opportunity	Yes
Water Volume	Yes
Water Quality	Yes

Scenic Value: The Verde River does possess "outstandingly remarkable" scenic values. Evaluation of scenic qualities using the Forest Service Visual Management System 1/ concluded that both segments of the river and visual surroundings classified as Variety Class A. This means the scenic qualities of landform, vegetation, and waterform within the study area are extremely high, with great variety and distinction. This free-flowing perennial stream provides a unique situation in the typical southwestern landscape.

1/ The Visual Management System contains the management direction and techniques for the protection and enhancement of visual characteristics. Documents are available for review at the Prescott, Coconino, and Tonto National Forests supervisors' offices.

Recreational Value: Although the Verde River provides an excellent opportunity for diverse recreation use and many people feel it does provide a quality recreation experience, it does not meet the "outstandingly remarkable" recreational value criteria. The recreational opportunities are many, however, none are considered outstanding or unique. The current use is not high, and at the present time, the majority of the river is not readily accessible to a variety of users.

Geologic Value: Although the geology of the river does contribute significantly to the outstanding scenery of the Verde River and presents an interesting geologic display, it is not considered "outstandingly remarkable." The geologic characteristics are quite common to the area and do not display unique or unusual geologic features or provide evidence of geologic processes which are unique or unusual in character.

Fish and Wildlife Values: "Outstandingly remarkable" fish and wildlife values result because of the high quality habitat for threatened and endangered species and the variety of resident and visitor wildlife species. The presence or suspected presence of 21 threatened, endangered or special interest wildlife species is sufficient to support the unique status of the study corridor. The entire Verde River has been identified as essential habitat for the bald eagle, an endangered species. The lower river segment, south of Camp Verde, is currently recognized as critical nesting territory.

Historic and Cultural Values: Only limited surveys have been conducted along the Verde River, however, information gained from the recorded sites shows the area to contain "outstandingly remarkable" historic and cultural values. Many of the sites are considered to be 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 which will probably give insight into changing land use strategies and their relationship to changing social organization through time.

Free-Flowing River: The minor existing diversions and associated impoundments within the study area do not affect the free-flowing character of the River.

Meaningful Experience Opportunity: The study segment provides a variety of meaningful experiences as identified in the discussions of scenery, recreation, and fish and wildlife.

Water Volume: The average annual flow varies from 35.7 cubic feet per second (cfs) near Paulden to 489 cfs near Tangle Creek. The lowest recorded flows range from 15 cfs near Paulden to 61 cfs at Tangle Creek. Although there is a significant drop in

flow during the driest periods, the flow is considered sufficient to permit full enjoyment of water-related outdoor recreation activities.

Water Quality: Water quality data collected by the U.S. Geological Survey indicate the waters inside the study area meet the standards set by the State of Arizona for aquatic and wildlife habitat and full body contact recreation use.

B. Classification Criteria and Determination

The Wild and Scenic Rivers Act provides three classes of rivers in the National System and defines them as follows:

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.

These are the criteria by which the study segments of the Verde River were judged. The following analysis indicates how classification for each section of the river was determined.

1. Segment A - This segment of the river contains three water diversions, a gas line crossing, three powerline crossings, 17 water gaps with associated range fences, 20 miles of railroad tracks, two stream gauging stations, and seven parcels of private land. The private lands have been developed as follows:

   Morgan Ranch: Undeveloped except for minor livestock handling facilities.

   Verde Ranch, Ranch headquarters and livestock handling facilities. A portion of this private land section has been subdivided into more than 75 residential lots. The lots currently remain under one ownership.

   Bear Siding: Undeveloped, used for dispersed recreation.

Perkinsville: Ranch headquarters with livestock handling facilities, irrigated pastures and several buildings.

Alvarez Property: Year-round residence and is used for farming and raising livestock.

Gold Tooth Claim: Subdivided into four parcels with one dwelling under construction and one cabin in place.

Packard Place: Non-producing property with caretaker facilities.

The river bed is accessible by five Forest [developed] roads and numerous undeveloped cross-country routes and trails. A primitive four-wheel drive road enters the study corridor near the Verde Ranch and provides access down the river to Duff Springs, a distance of approximately 5 miles. Forest Road No. 354 and the railroad cross the river by separate bridges near the Perkinsville private lands.

After evaluating the combined impacts of the shoreline improvements and numerous access routes, the study team determined that this section of the river does not meet the criteria for wild or scenic classification. However, it could be classified as recreation.

2. Segment B - This segment of the river is totally free of impoundments and diversions. It is divided into two sections based on ease of access and presence of improvements.

   a. North Section: This section extends from Beasley Flats to the junction of Fossil Creek, a distance of 22 miles. The study corridor contains two powerline crossings, ranch headquarters, one stream gauging station, and the Childs Power Generating Plant with its support facilities. A power transmission line extends up the river from the generating station for 5 miles before it leaves the study corridor.

      Access is provided by six Forest [developed] roads and four trails. There are also a few four-wheel drive cross-country routes that provide access above the riverbed. The roads are not highly visible from the river and do not detract from the natural setting.

      The Brown Springs private lands are located less than one-sixteenth mile from the river. Improvements consist of a modern home, guest quarters, outbuildings, hydroelectric system, and an underground irrigation system.

The study team compared the development in this section to the development in segment A and determined that a more primitive situation existed. The presence of access roads, the Childs Power Plant, and the Brown Springs Ranch preclude wild classification but do not prevent classification of the section as scenic.

b. South Section: This river section extends south from the junction of Fossil Creek to the Sheep Bridge near Tangle Creek Junction, a distance of 28 miles. It is completely undeveloped and accessible only by foot and horseback. Forest Roads Nos. 269 and 479 provide access to the trail head located near the Sheep Bridge. The study team made the determination that this section of the river meets the criteria for wild classification.

C. Criteria for Evaluating Alternatives

These criteria are used to select a preferred alternative for future management of the study segment of the Verde River. They were identified from legislation, regulations, and public and management input relating to this Wild and Scenic Rivers Study.

1. Preserve free-flowing conditions and outstandingly remarkable characteristics of the river and its immediate environment.

   Source: Wild and Scenic Rivers Act, Section 1(b).

   Comment: The Act identified a national policy of river preservation that is intended to complement a national policy of river development.

2. Conform to availability and suitability of those lands involved.

   Source: National Forest System Land and Resource Management Planning Regulations.

   Comment: Lands must not only be available for particular resource management, but must also be well suited, i.e., the intended management activities must be appropriate to apply, without unacceptable adverse environmental effects.

3. Minimize impacts on private land rights.

   Source: Public meetings.

Comment: This concern was expressed with particular referrence to the incidence of trespass and vandalism on private lands. Also, private landowners indicated a concern regarding possible loss of their ownership rights through the scenic easement process. 2/

4. Display a high degree of compatibility with the desire and recommendations of State and local governments.

   Source: Wild and Scenic Rivers Act, Section 5c.

   Comment: Local governments bear a large portion of the effects, both positive and negative, of Federal designation and management, therefore their input should receive special consideration.

5. Increase the supply of outdoor recreation opportunities and services through Forest Service programs that emphasize dispersed recreation.

   Source: A Recommended Renewable Resources Program, Final Environmental Statement, 1976.

   Comment: After evaluating five alternative goals for Forest Service outdoor recreation program, this one was selected.

6. Provide a mix of goods and services responsive to local area economic growth.

   Source: Special local problem from local open houses.

   Comment: The growth of local population due to energy development will cause higher demands on Forest goods and services.

7. Ensure protection and enhancement of habitat for threatened and endangered wildlife species.

   Source: Forest Service Resource Managers.

   Comment: By law and through mutual agreement with the Audubon Society, the Forest Service will take necessary measures to protect and enhance riverine habitat for threatened and endangered wildlife species.

2/ Under the terms of the Wild and Scenic Rivers Act of 1968, the Secretary of Agriculture is "authorized to acquire lands and interest in lands within the authorized boundaries of any component of the National Wild and Scenic Rivers System..." The options available for acquiring such interest in private lands are to purchase on a willing buyer-seller basis or purchase of development rights through a scenic easement. In either case, an appraised value will have to be established with negotiations being based upon this value.

IV. ALTERNATIVES CONSIDERED

A. Alternative Formulation Process

Because decisions made in this study affect water development and uses and other related land uses, the Water Resources Council's Principles and Standards for Planning Water and Related Land Resources were considered in the formulation and evaluation of alternatives. See page 49.

In brief, the Principles and Standards require formulation of plans serving co-equal national objectives of National Economic Development (NED) and Environmental Quality (EQ). Once established, the alternatives are analyzed and their effects are displayed in an accounting matrix that considers regional economics and social well-being, as well as environmental quality and national economics.

A no action alternative is also formulated to provide a baseline for comparison of effects of all alternatives. No action does not mean that planned management is absent; to the contrary, it is the deliberate continuation of the current management and existing plans into the future. Under no action, the river would not be designated as a wild and scenic river component since that would be a departure from the current management. Similarly, no major investments for economic benefit would be made unless they are currently planned.

Two conditions underlie the formulation of a NED alternative. First, there must be a need for economically measurable goods and services of a resource and, second, the planning agencies must be able to implement actions that satisfy the needs.

The affected environment section of this statement describes the social and economic character of the region that includes the study segments of the Verde River. Retirement, farming, ranching, and tourism are the mainstays of the local economy. The national economy, as characterized by a NED alternative, could be enhanced by increased or more efficient production of several commodities. Minerals, livestock grazing, water for irrigation, or hydroelectric power, and recreation at developed sites could all be considered as logical components of a NED alternative.

The current management direction aimed toward protection of riparian and bald eagle habitat, as well as the need to maintain grazing within the capacity of the range, indicates that increases in livestock grazing are not possible. While there is some mineral exploration and extraction activity in the region, there is none going on in the study area nor has there been any indications of deposits of economic value. Developed

recreation needs are increasing, but topography, restricted access and lack of suitable sites precludes large scale developments adjacent to the river.

Although several potential water development projects have been considered by various entities, none have economic or other characteristics favorable enough for firm project proposal at this time. The Cliff Dam site, currently being considered by Central Arizona Water Control Study (CAWCS), is located outside the river study area. See Appendices C and D.

From this analysis, the study team concluded that no viable NED alternative exists. The no-action alternative serves the NED objective best by keeping development options open.

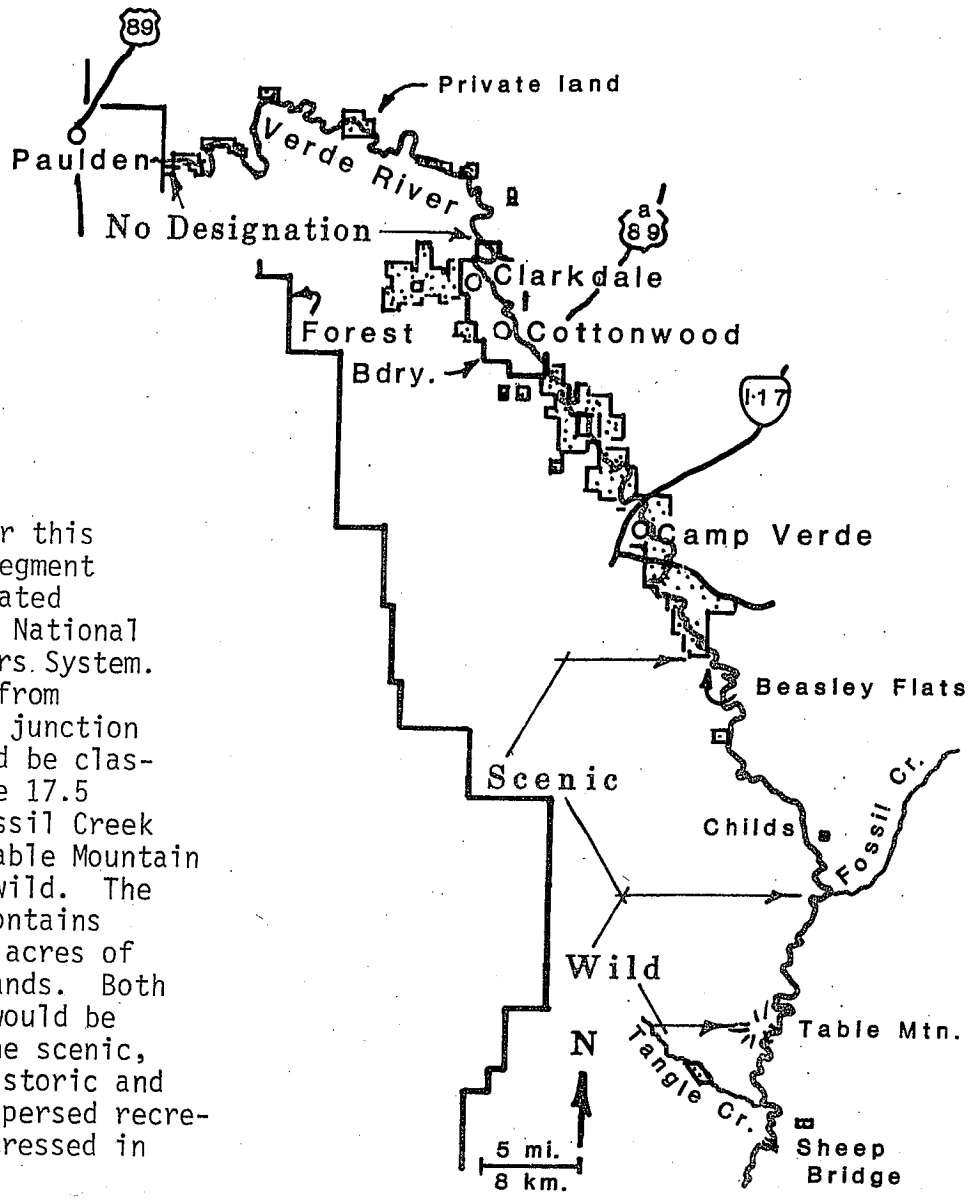
Several Environmental Quality alternatives are possible. They present different degrees of protection of the free-flowing nature of the study segments of the Verde River and protection and enhancement of the outstandingly remarkable scenic, fish and wildlife, historic and cultural values.

B. Alternative Descriptions

ALTERNATIVE A - Alternative A is a continuation of present management. The river, its immediate environs, and current land uses would remain essentially unchanged. This alternative includes obtaining legal public access through private lands to the river or construction of short sections of road when easements and rights-of-way cannot be obtained on a willing buyer-seller basis.

Under this alternative, future management of the National Forest lands would be directed and controlled under National Forest Land and Resource Management Plans scheduled for completion in 1982 and environmental assessments of individual proposals. Management decisions would rest with the responsible Forest Supervisors and District Rangers in accordance with current delegated authority.

This alternative would allow development along the river and would place minimal constraints on existing uses and activities, including the planned cattle exclosures for protection of the riparian habitat. The existing power project withdrawals would remain in effect. The temporary mineral withdrawal imposed by the Wild and Scenic Rivers Act would be lifted.



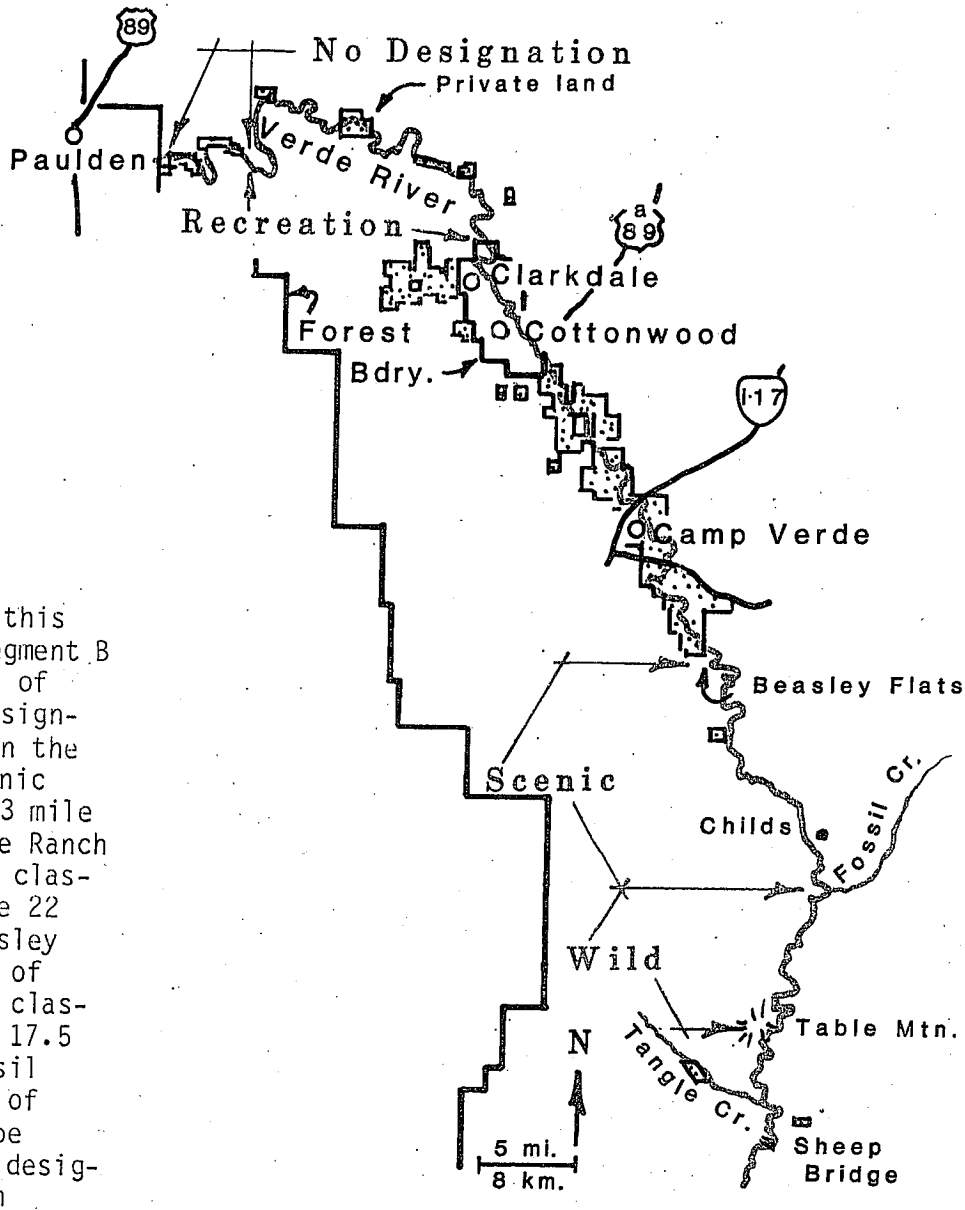
ALTERNATIVE B - Under this alternative, river segment B 1/ would be designated for inclusion in the National Wild and Scenic Rivers System. The 22 mile section from Beasley Flats to the junction of Fossil Creek would be classified scenic and the 17.5 mile section from Fossil Creek to the vicinity of Table Mountain would be classified wild. The designated segment contains approximately 12,640 acres of public and private lands. Both classified sections would be managed to enhance the scenic, fish and wildlife, historic and cultural values. Dispersed recreation use would be stressed in management.

River segment A would not be designated under this alternative. Management of this 38.5 mile river segment between the Forest boundary and Clarkdale would be the same as described in Alternative A.

Designation may impose some constraints on the private land parcel located near Brown Springs. The intent is not to change the present private land use, but to prevent future developments that would detract from the values for which the river was designated and classified. The management plan will evaluate the need for scenic easements or county zoning which are desirable but not essential.

Should the river be designated, a detailed study would be made to determine access needs. Roads and trails would be improved or closed as necessary. Also, sanitary and parking facilities would be needed at primary access points.

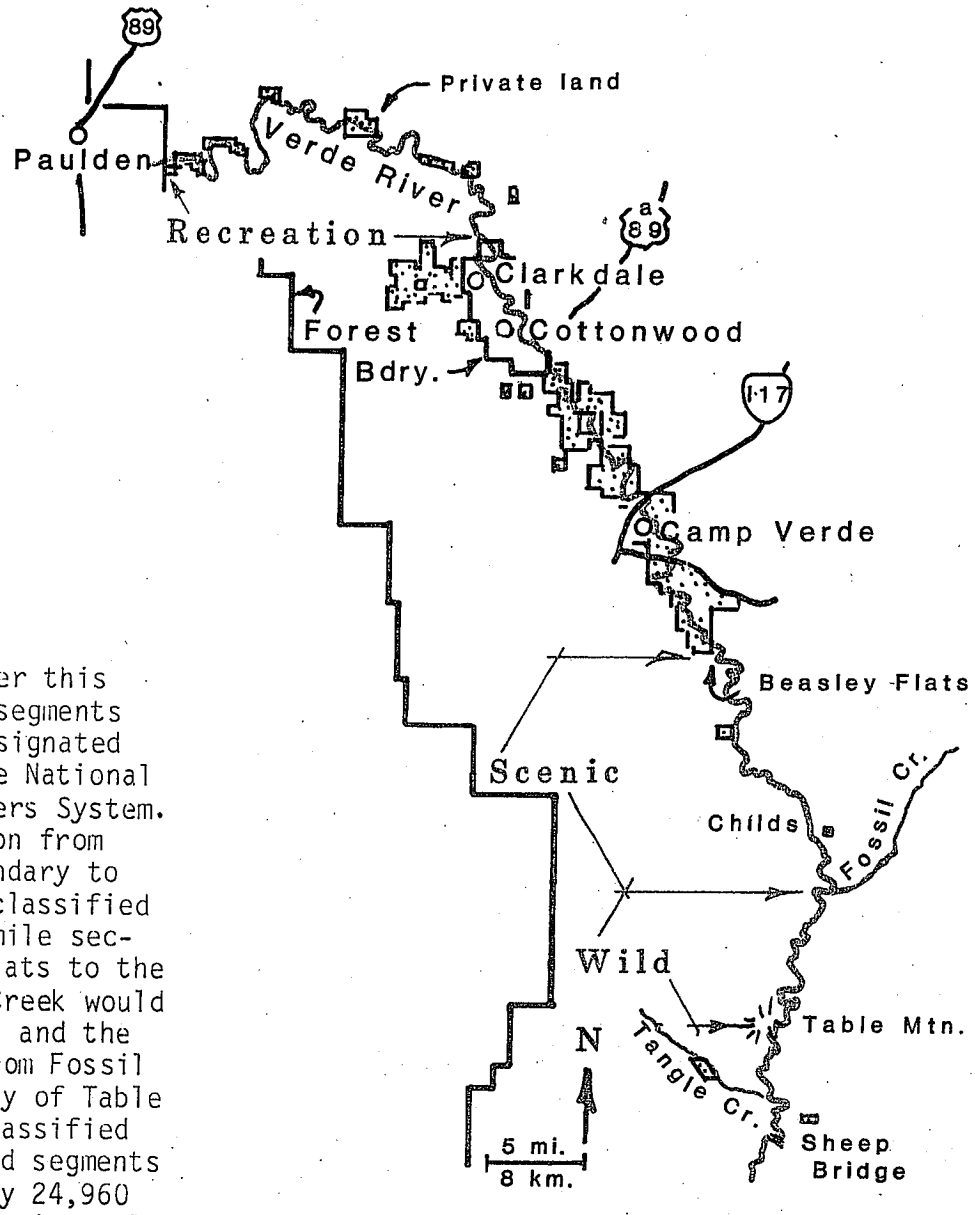
1/ The 10.5 mile river section between Table Mountain and Tangle Creek was excluded from the study during the analysis and evaluation process (See C. Alternatives Eliminated From Further Consideration, page 44.) The term "study segment B" from this point forward includes only the river section between Beasley Flats and Table Mountain.



ALTERNTIVE C - Under this alternative, river segment B and all but 5.5 miles of segment A would be designated for inclusion in the National Wild and Scenic Rivers System. The 33 mile section from the Verde Ranch to Clarkdale would be classified recreation, the 22 mile section from Beasley Flats to the junction of Fossil Creek would be classified scenic and the 17.5 mile section from Fossil Creek to the vicinity of Table Mountain would be classified wild. The designated segments contain approximately 23,210 acres of public and private lands. The classified sections would be managed to enhance the scenic, fish and wildlife, historic and cultural values. Dispersed recreation use would be stressed in management.

The 5.5 mile river section between the west Forest boundary and the Verde Ranch would not be designated under this alternative. Management of this section would be the same as described in Alternative A.

There are 737 acres of private lands located along the designated river segments. Designation would impose some constraints on future development of a portion of these lands. The extent of the restrictions and number of acres actually affected would be determined in a study to be conducted if the river is designated. The study would also determine access needs including sanitation and parking facilities. Roads and trails would be improved or closed as necessary.



ALTERNATIVE D - Under this alternative, river segments A and B would be designated for inclusion in the National Wild and Scenic Rivers System. The 38.5 mile section from the west Forest boundary to Clarkdale would be classified recreation, the 22 mile section from Beasley Flats to the junction of Fossil Creek would be classified scenic and the 17.5 mile section from Fossil Creek to the vicinity of Table Mountain would be classified wild. The designated segments contain approximately 24,960 acres of public and private land.

This alternative is basically the same as Alternative C, with the addition of 5.5 miles of recreation classified river near the west Forest boundary. Management and development would be the same as described for Alternative C.

There are 763 acres of private lands located along the added 5.5 mile river section. This brings the total private lands that could be affected by designation under this alternative to 1,500 acres.

C. Alternatives Eliminated From Further Consideration

In a letter dated August 29, 1979, from the Forest Supervisor, Tonto National Forest to the Projects Manager, Bureau of Reclamation (now the Water and Power Resources Service WPRS), the Forest Service indicated its intent to study the Verde River from Table Mountain downstream to Tangle Creek in conjunction with the legislated study. Response from WPRS dated December 3, 1979, indicated the Central Arizona Water Control Study (CAWCS) was reviewing viable alternatives for needed flood control or protection actions on the Verde River. During this same period, the Salt River Project was in the early stages of evaluating the installation or expansion of hydroelectric generation facilities on the river. They indicated enlargement of Horseshoe Dam was a realistic consideration for both flood control and hydroelectric generation. The proposed enlargement of Horseshoe Dam would have resulted in a maximum reservoir level between an elevation of 2,160 and 2,170 feet. This would impound the Verde River approximately eight miles above Tangle Creek.

Flooding in the Salt River Valley below the confluence of the Salt and Verde Rivers is a serious problem - a problem highlighted by the floods of the past three years. All involved agencies and the public agree that some sort of additional flood control actions are needed.

Based on information provided by WPRS, SRP and the need for some type of flood control action on the Verde River, the 10.5 mile river section between Table Mtn. and Tangle Creek was dropped from the study. The alternative that contained the 10.5 mile river section was identified as Alternative E during the initial data gathering stage. The impacts of Alternative E were not evaluated and presented to the public in the Draft Environmental Statement. However, during the analysis and evaluation process, it was determined that the river section did meet both the eligibility and classification criteria in the Wild and Scenic Rivers Act.

Since the release of the Draft Environmental Impact Statement in August, 1980, the CAWCS has published a factbook. The study has been completed through Stage II, which eliminates the raising of Horseshoe Dam as an alternative. The Cliff Dam site is currently being considered for both flood control and regulatory storage. Dam safety of Horseshoe Dam is also being considered in the study. See CAWCS summary in Appendix C.

As a result of the information provided by CAWCS, the reasons for dropping the 10.5 mile river section between Table Mountain and Tangle Creek from the study are no longer valid. However, considering that the impacts of designating the river section into the Wild and Scenic Rivers System were not evaluated in the Draft Environmental Statement and presented to the public, the river section will not be considered in the Selected Alternative section of this report.

V. EFFECTS OF IMPLEMENTATION

A. Alternative Effects

The tables in this section display specific comparisons of uses and consequences of each alternative, including costs and social and economic implications. These values for 1978 are also shown to form a basis for comparison.

TABLE 3

COMPARISON OF USES FOR THE ALTERNATIVES IN 1990

Activity	1978	Alter. A	Alter. B	Alter. C	Alter. D
Water Yield 1/	354,300	354,300	354,300	354,300	354,300
Water Quality	NA	0	+	+	+
Reservoir Construction Opportunities	NA	0	-	-	-
Cattle (AUM) 2/	1,190	1,190	1,190	1,190	1,190
Minerals 3/					
Exploration	0	0	0	0	0
Development	0	0	0	-	-
Wildlife Habitat 4/	0	0	+	+	+
Fisheries Habitat	0	0	+	+	+
Timber Production	NA	NA	NA	NA	NA
Roadless Areas	0	0	0	0	0

LEGEND

NA Not applicable
\+ Enhanced opportunities, quantity, quality
0 No effect, no change
\- Negative effect on opportunities, quantity, quality

1/ Data taken from U.S.G.S. water gauging station located 1.3 miles south of Tangle Creek Junction (Average acre feet/year).
2/ Designation under the National Wild and Scenic Rivers Act will not effect livestock grazing capacity of the river corridor. Other management activities such as protection of bald eagle habitat could effect permitted numbers. An AUM is the equivalent of one cow and calf grazing for 30 days.
3/ Oil, gas, hardrock, geothermal.
4/ Including riparian habitat.

TABLE 4

CHANGES IN RECREATION USE IN 1990 BY ALTERNATIVES

	Present 1/ 1978	Alter. A 2/ RVD's/1990 4/	Alter. B 3/ RVD's/1990	Alter. C 3/ RVD's/1990	Alter. D 3/ RVD's/1990
Picnicking 5/	3,200	4,984	5,562	5,996	6,191
Camping 6/	6,000	8,440	9,683	10,047	10,376
Water-based Recreation	5,500	7,995	9,573	10,216	10,470
Dispersed Motorized Recreation	1,100	1,595	1,500	200	0
Dispersed Nonmotor Recreation	900	1,300	1,615	1,707	1,741
Hunting	2,000	2,407	2,547	2,547	2,547
Non-hunting Wildlife	800	1,145	1,336	1,459	1,504
Fishing	5,700	7,705	9,732	10,101	10,236
TOTAL	25,200	35,571	41,548	42,273	43,065

1/ Recreation use for 1978 was estimated using available data collected from the Forest Service Recreation Information Management System, input from Forest Service personnel and other data collected by study team.

2/ Alternative A use increases are based on average activity increases estimated from the Forest Service Recreation Information Management System.

3/ Alternatives B, C, and D use based on Alternative A plus an anticipated increase resulting from designation and improved access.

4/ RVD is defined as a recreation visitor day (12 hours of recreation activity.)

5/ Picnicking - Picnicking is defined as picnicking in other than developed picnicking sites.

6/ Camping - Camping is defined as camping in other than developed camping sites.

Water yield would not be changed under any of the alternatives as there is no opportunity to increase water yield within the study area. Usually, an instream-flow claim for the amount of water needed for wild and scenic river purposes would be included in this report. However, it would be impossible to determine an accurate instream-flow claim with the timeframe of this study. The determination of water needs usually takes an interdisciplinary team several months, if not years, to complete. It would be inadvisable to specify any instream-flow claims in this document that are not fully defensible. Such data and the methodology used to derive it would undoubtedly set off a debate involving water rights issues.

The Verde River has a built-in safeguard against large upstream uses of water. Most of the river's water is currently being used downstream from the study area for agricultural, industrial, and domestic purposes under ajudicated water rights. Therefore, existing downstream water rights should prevent excessive diversion and loss of flow in the study segments.

The completion of the Central Arizona Project (CAP) in 1987, could have an impact on instream-flow of the river. If the communities that have been tentatively granted a share of the Colorado River water are permitted to exchange CAP water for Verde River water, it would be diverted from the study segments, thus reducing the flow. Should the exchange become a reality, an indepth study of the instream-flow needs to maintain the river values will be required under Alternatives B, C, and D.

The required minimum flow would not be evenly distributed. Flow data gathered from 1945 to present indicate that a minimum flow of 61 cfs and a maximum flow of 91,400 cfs can be expected near the Tangle Creek Junction at the extreme southern end of the study area. The past 35 year average flow is 489 cfs.

The existing water quality would be maintained or improved in all alternatives. The State of Arizona has the responsibility to set water quality standards and has designated the Verde River for "Body Contact". Under this designation, the water quality will not be degraded below its existing condition. The State however, could change or rescind the designation.

The increase in recreation use and possible construction/reconstruction of access roads, parking and sanitation facilities is expected to have an impact on water quality under Alternatives B, C, and D. Sedimentation is expected to increase slightly during periods of construction or reconstruction. However, it would decrease below the current level once the facilities are constructed and off-road vehicle travel is restricted to designated travelways. Increased recreation use at river

access points, would tend to compact soils and cause minor vegetative modifications. Periodic closing of highly used access points may be necessary for rehabilitation purposes. The net results of designation on water quality is expected to be positive.

Reservoir construction opportunities would remain unchanged under Alternative A and would be eliminated within the designated segments in Alternatives B, C, and D. There is no merchantable timber within the study area; therefore, designation would have no effect on timber harvesting. Grazing production would also remain unchanged.

Although no known economic minerals occur, the potential to utilize minerals within the study area would be reduced under Alternatives C and D. River segment B is currently withdrawn from mineral entry by existing Reclamation Withdrawals, so classification under Alternative B would have no effect. The potential for geothermal development would be reduced under Alternatives B, C, and D.

No activities to improve fisheries habitat are proposed in any of the alternatives. Increased recreation use due to obtaining legal public access and designation in the National Wild and Scenic Rivers system would perhaps increase pressure on existing fish populations but would have minimal impact on their habitat. The impact on wildlife habitat is expected to remain about the same under all alternatives. However, the opportunities to improve wildlife habitat would increase with Alternatives B, C, and D, as emphasis is given to comply with Section 10 of the Wild and Scenic Rivers Act. The projected recreation use increase could have an adverse impact on wildlife populations, making it necessary to impose administrative constraints on the public during critical periods. For example, it may be necessary to impose a closing order restricting public use on segments of the river, during the nesting period of the bald eagle to promote survival of the fledgings.

Motor vehicle use would be restricted to specified roads within designated sections of the river. Therefore, dispersed motorized recreation use would decline under Alternatives B, C, and D. Most of the current use is occurring in river segment A between the Verde Ranch and Perkinsville; therefore Alternatives C and D would have the greatest impact.

If the current recreation use trend continues, a 36 percent increase in river use can be expected under Alternative A by 1990. The combined projected user increase due to the current trend and designation would be 60 percent for Alternative B, 67 percent for Alternative C, and 71 percent for Alternative D. Designating the Verde River as a component of the National

Wild and Scenic Rivers System would have little effect on big or small game hunting. The increase in use would result primarily from picnicking, camping, water-based recreation and fishing activities. The two roadless areas designated for further planning by the RARE II process would not be affected by any of the alternatives.

B. Economic, Environmental, and Social Effects Displays

Including a river in the National Wild and Scenic Rivers System may have significant environmental, social, and economic effects. Chapter IV described use of guidelines known as the Principles and Standards for Planning and Related Land Resources (Federal Register 38;174;111, Section 19, 1973). As outlined in the Principles and Standards..., the study will include alternative plans for future management of the study area. Generally, this planning should serve two equal objectives of national economic development (NED) and environmental quality, (EQ). The effects of achieving these objectives are displayed in tables called a system of accounts, and include a national economic development account, environmental quality account, regional development account, and social well-being account.

Tables 3 and 4 provide the basic data for the system of accounts displayed in this section. The outputs of the alternatives are expressed as those obtained from the river corridor. They are based on land suitability/capability and past trends.

As previously discussed, no NED alternatives were considered because there are no firm proposals for economic development within the study segments of the Verde River. All alternatives for the river can be considered EQ alternatives although they do have some economic benefit. Because the primary objective of Alternatives B, C and D is environmental protection, and the magnitude of the economic benefits is small, these three alternatives are considered primarily EQ alternatives.

The values used in the analysis are those used in the 1980 RPA recommended program. An economic impact analysis model (developed during the RARE II process for the Coconino, Gila, and Yavapai Counties) was used to determine the impacts on each of several economic indicators for the alternatives.

NED Account. Table 5 displays the outputs by alternatives, annual costs, and the effects on the national economy expressed as annual income and person years employment. Estimated initial cost of acquiring scenic easements, construction of facilities, and planning is also displayed for comparison purposes.

EQ Account. The environmental quality account in Table 6 displays the effects of the alternatives on selected components of the environment.

Regional Development Account. A Regional development account is concerned with economic effects of a proposal on the immediate region of study. It shows the direct and indirect effects on economic activities induced by the alternatives. Table 7 displays the gross Regional product generated, Regional income generated, and Regional employment generated for each alternative.

Social Well-Being Account. Social well-being is defined as the number of choices people can make. When choice is broadened, social well-being is enhanced or improved. Social well-being is displayed for the alternatives in Table 8.

TABLE 5

ALTERNATIVE EFFECTS ON NATIONAL ECONOMIC DEVELOPMENT 1/

Account Component	Alter. A	Alter. B	Alter. C	Alter. D
Outdoor Recreation (RVD's) 2/				
Picnicking	4,984	5,562	5,596	6,191
Camping	8,440	9,683	10,047	10,376
Water-based Recreation	7,995	9,573	10,216	10,470
Dispersed Motorized	1,595	1,500	200	0
Dispersed Nonmotorized	1,300	1,615	1,707	1,741
Hunting	2,407	2,547	2,547	2,547
Wildlife-Nonhunting	1,145	1,336	1,459	1,504
Fishing	7,705	9,732	10,101	10,236
Total Annual Visitor Days	35,571	41,548	42,273	43,065
Recreation Annual Income	$168,897	$201,119	$212,623	$217,521
Recreation Annual Cost	$9,441	$11,080	$11,588	$11,845
Employment Created By Recreation (Private Sector Person Years)	24.37	29.05	30.73	31.44
Domestic Livestock				
Annual Output (AUM's) 3/	1,190	1,190	1,190	1,190
Annual Costs	$2,380	$2,380	$2,380	$2,380
Locatable Minerals				
Acres Withdrawn 4/	15,820	15,820	15,820	15,820
Acres Open for Entry	7,640	7,640	7,640	7,640
Leasable Minerals				
Acres Withdrawn	0	5,600	5,600	5,600
Acres Available	23,460	17,860	17,860	17,860
Transportation System				
Development Cost	62,000	118,000	370,000	370,000
Annual Maintenance Cost	$17,480	$31,905	$44,100	$44,100
Recreation Facilities				
Development Costs	0	102,500	225,000	225,000
Annual Maintenance	0	$3,600	$5,400	$5,400
Scenic Easement Acquisition	0	5/	$1,075,700	$2,041,500
Management Plan Preparation	0	$13,000	$23,000	$25,000

1/ Unless otherwise indicated, all costs are expressed in 1980 dollars and are one-time expenditures. The alternative effects are projected to the year 1990.
2/ RVD's - Recreation Visitor Days, 12-hour use period.
3/ AUM's - Animal Use Months.
4/ Acres currently withdrawn from mineral entry by Reclamation Withdrawals.
5/ See footnotes at the bottom of pages 38 and 56 for definition of Scenic Easements.

TABLE 6

EFFECTS ON COMPONENTS OF THE EQ ACCOUNT

Components	Alternative A No Designation	Alternative B	Alternative C	Alternative D
Free-Flowing River	Option to develop water and power projects remain open.	17.5 miles protected as wild; 22 miles protected as scenic.	17.5 miles protected as wild; 22 miles protected as scenic; 33 miles protected as recreation.	17.5 miles protected as wild; 22 miles protected as scenic; 38.5 miles protected as recreation.
Maintain and Protect Bald Eagle Habitat	Loss of habitat from private land development and inundation could occur.	Habitat will be protected in segment B.	Habitat protected in all but 5.5 miles of study area.	Habitat protected in entire study corridor.
Protect and Preserve Historical Archeological Sites	Protected by current laws.	Protection would continue under existing laws, however, National designation would attract more visitors which may result in increased damage and vandalism. Identification and protection of sites would be stressed in management plan.		
Maintain Water Quality and Quantity	Existing State and Federal law would be applicable.	Classification assures protection of water quality and quantity.		
Maintain Scenic Qualities	Natural beauty and open space on private land currently regulated by local zoning only.	Only those lands within segment B of the study area would be subject to constraints associated with the Wild and Scenic Rivers System.	A total of 72.5 miles the river would be subject to constraints associated with the Wild and Scenic Rivers System.	All the area within the study area would be subject to constraints associated with the Wild and Scenic Rivers System.
Irreversible or Irretrievable Commitment of Resources	No assurances.	No assurances in segment A. Assures long-term options for nonconsumptive uses in segment B.	Assures long-term options for nonconsumptive uses in all but 5.5 miles of the study corridor.	Assures long-term options for nonconsumptive uses in the study corridor.

TABLE 7

ALTERNATIVE EFFECTS ON REGIONAL DEVELOPMENT

Account Component	No Designation Alter. A	Alter. B	Alter. C	Alter. D
Gross Regional Product Generated				
Agriculture (livestock)	121	136	142	144
Agriculture (other)	51	60	62	72
Trade & Manufacturing	78,224	92,904	98,393	100,800
Minerals & Energy	337	401	423	442
Services (Rec. & Tourism)	100,913	119,998	126,901	129,885
All Other Economic Sectors	37,847	45,103	47,232	48,098
Total Product	$217,493	$258,602	$273,153	$279,441
Regional Income Generated				
Agriculture (livestock)	32	36	37	38
Agriculture (other)	16	19	20	20
Trade & Manufacturing	32,551	38,652	40,947	41,955
Minerals & Energy	53	63	64	68
Services (Rec. & Tourism)	52,463	62,488	66,103	67,635
All Other Economic Sectors	13,722	16,352	16,686	17,418
Total Income	$98,836	$117,610	$123,857	$127,134
Regional Employment Generated (Person Years)				
Agriculture (livestock)	.005	.006	.006	.007
Agriculture (other)	.002	.002	.003	.003
Trade & Manufacturing	4.561	5.414	5.736	5.878
Minerals & Energy	.003	.003	.004	.004
Services (Rec. & Tourism)	10.199	12.181	12.898	13.198
All Other Economic Sectors	1.55	1.848	1.93	1.965
Total Employment	16.320	19.454	20.574	21.055

TABLE 8

SOCIAL WELL-BEING

Component Need	No Action Alternative A	Alternative B	Alternative C	Alternative D
Recreation Experience	Little change from existing status. Could be some gradual decline due to private lands limiting access to river.	Segment B would be protected in near natural condition. Improved access in segment B would encourage more recreation use.	All but 5.5 miles of study area would be retained in near natural condition. Better access would increase number of recreationists.	Full length of river would be retained in near natural condition. Better access would increase number of recreationists.
Freedom of Travel	Some improvement, however many of the current access problems would remain.	ORV travel restricted on study segment B. Improved road and trail access in segment B.	ORV travel restricted on all but 5.5 miles of study area. Improved road and trail access to both segments.	ORV travel restricted on entire study area. Improved road and trail access to both segments.
Private Ownership Rights	Private land rights constrained only by State law and county regulations.	Very limited impact on private land rights.	Moderate impact on private land rights.	This alternative would have the greatest impact on private land rights.
Tax Base	Tax base would not be affected.	Very slight decrease in tax base.	Acquisition of scenic easements could produce a much greater reduction in the tax base but less than Alternative D.	Acquisition of scenic easements could have the greatest reduction on the tax base.
Life, Health, Safety	Neutral for this component.	Neutral for this component.	Neutral for this component.	Neutral for this component.
Emergency Preparedness	Currently, 15,820 acres of the river study corridor is withdrawn from mineral entry by Reclamation Withdrawals. The remaining 7,640 acres are open to entry without restrictions.	No change from Alternative A except approximately 5,600 acres would be withdrawn from mineral leasing.	Approximately 7,160 acres of the open-to-entry lands would be subject to resrictions imposed by designation and approximately 5,600 acres would be withdrawn from mineral leasing.	Approximately 7,640 acres of the open-to-entry lands would be subject to restrictions imposed by designation and approximately 5,600 acres would be withdrawn from mineral leasing.

C. Summary of Effects

1. Alternative A. The no action alternative would not curtail private land uses or water developments. Power and Reclamation withdrawals would remain in effect. Construction and maintenance of stream gauging stations and other water related improvements would be permitted within normal environmental constraints.

Development of private lands within the study corridor will continue under state and county guidelines. For example, a portion of the Verde Ranch Property has been subdivided into over 75 residential lots. None of the lots have been sold. However, the existence of the subdivision indicates development potential. Similar type developments on private lands could have an adverse impact on the general appearance of the landscape, water quality, and wildlife habitat.

Livestock grazing would continue within a balance of range capacity as defined and directed in current allotment management plans. Range improvements would be considered as needed to effectively manage the river corridor. Cattle exclosures necessary to protect key wildlife riparian areas and the establishment of young cottonwood trees would be constructed as planned without constraints that may be imposed by designation.

Recreation use would continue to increase at a slow to moderate rate. The increase would be in proportion to the general population trend. River use would also increase as other more desirable rivers become congested. Opportunities for future recreation developments would continue to exist.

There are no present plans for constructing new access roads; however, there is a need to resolve the current river access conflict between the using public and private landowners along the river. Obtaining road rights-of-way or construction of short road sections are both viable alternatives. Future road development would be constrained only by the necessary environmental considerations. The same would be true for utility corridors, railroad and pipeline rights-of-way along or crossing the river. Current Federal and State laws and regulations would apply to mining activities.

This alternative does not provide permanent protection of the free-flowing nature of the river. Construction of dams and other developments for irrigation and hydroelectric power would not be precluded.

2. Alternative B. Under this alternative, river segment A between the Forest boundary and Clarkdale would not be designated and segment B between Beasley Flats and Table Mountain would be designated and classified scenic and wild. The effects listed for Alternative A apply to segment A to the extent that any planned actions within the segment do not destroy the free-flowing nature of the designated portion of the river. The following effects apply to river segment B.

Designation and classification may curtail some uses and development on the included parcel of private lands. These constraints could be in the form of State, County, local zoning ordinances or scenic easements 1/ acquired by the Federal Government. Private land uses such as commercial development, erection of signs or billboards, subdivisions and permanent trailers or mobile homes could be curtailed. The private landowner would be fully compensated for loss of development rights should it be necessary to obtain a scenic easement. Present uses would not be affected without the consent of the landowner. The landowner will retain title to the land. Public access provisions would not be included in an easement for the Brown Springs property since the privately-owned lands do not extend to the river's edge. Recreationists and other river visitors would not be allowed on private lands without the owner's permission.

Following designation, a detailed study of the river's access system would be made. Existing roads and trails would be evaluated and upgraded or closed as needed to provide reasonable public access or protect the values which caused the river to be added to the National Wild and Scenic Rivers System. The need for parking and sanitation facilities would also be evaluated during the study. Off-road vehicle travel would not be permitted within the river corridor. New road construction and utility corridors would be permitted immediately adjacent to the classified river sections, if they do not detract from scenic values and meet the existing environmental constraints.

1/ "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 Rivers System, for the purpose of protecting the natural qualities of a designated wild, scenic, or recreational river area, but such control shall not effect, without the owner's consent, any regular use exercised prior to the acquisition of the easement. (16 U.S.C. 1286) In the case of the Verde River, the terms of the scenic easement would be negotiated with each landowner.

Improved access and designation of the river segment is anticipated to increase recreation use of the river. The majority of the additional users would come from other than local communities, providing some economical benefit to the Verde Valley. Primitive type recreation opportunities would be retained for the designated river segment.

Designation would not preclude geothermal development along the river. However, the developments must be compatable with river segment classification.

Subject to valid existing rights, the minerals in Federal lands which constitute the bed or banks of the river or are within one-quarter mile of the bank are withdrawn from all forms of appropriation under the mining laws or mineral leasing laws for the classified wild river section. Mining activities on valid claims within the scenic classified section would be subject to regulations deemed necessary by the Secretary of Agriculture for the protection of the river values.

Livestock grazing will continue to the extent it does not detract from the values for which the river was selected and designated under the provisions of the National Wild and Scenic Rivers Act. Unobtrusive fences and other range improvements would be permitted if they do not produce a significant adverse impact on the natural character of the river.

Designation would increase the opportunity to enhance the habitat value of the river for the bald eagle and other threatened and endangered wildlife species. Increased recreation use resulting from designation could reach a point where it adversely affects the nesting bald eagle and other wildlife species. Should a user-wildlife conflict result, some user restrictions would be required. The increased number of people using the river would also produce a greater wildfire risk and could have a slight adverse effect on water quality.

Designation would not affect the current operation and maintenance of existing facilities such as Childs Power Plant, gauging stations, transmission lines, fences, etc. Departures from current procedures, including access and new construction that adversely affects the natural character of the area could be prohibited.

This alternative protects the free-flowing nature and outstanding values of the river between Beasley Flats and Table Mountain. Dams and other diversion structures cannot be constructed in this segment.

3. Alternative C. This alternative designates all but 5.5 miles of river segment A and all of segment B into the National Wild and Scenic Rivers System. The effects listed for Alternative A apply to the undesignated portion of the river and the effects listed for Alternative B apply to the designated and classified river segment B. The following discussion applies to the designated portion of river segment A between the Verde Ranch and Clarkdale, which would be classified recreation.

A recreational classification for the designated portion of river segment A would curtail some uses and development on five separate parcels of private lands. The constraints could be in the form of State regulations, local government zoning ordinances, and/or scenic easements acquired by the Federal Government. Landowners would be fully compensated for any loss in the market value of their properties if it is necessary to acquire scenic easements. Present land uses would not be affected without the owner's consent. The landowner will retain title to the land. The necessary rights to assure reasonable public access to and along the river would be acquired.

A portion of the included private lands have potential for subdivision. This type of development could have an adverse impact on water quality. The river would require periodic monitoring and enforcement of State Water Quality Standards.

Following designation, a detailed study of the river's access system would be made. Existing roads and trails would be evaluated and upgraded or closed as needed to provide reasonable public access or protect the values which caused the river to be added to the National Wild and Scenic Rivers System. The need for parking and sanitation facilities would also be evaluated during the study. Off-road vehicle travel would not be permitted within the river corridor. New road construction and utility corridors would be permitted immediately adjacent to the classified river section, if they do not detract from scenic values and meet the existing environmental constraints. Trail access to the river section south of Perkinsville would be required.

There are three potential recreation development sites along the river between Perkinsville and the Verde Ranch. None of the inventoried sites are currently programmed for development.

Except for primitive type improvements, future recreation facilities (campgrounds, etc.) would be located outside the river corridor.

Mining and leasing activities on Federal lands within the boundaries of the Recreation classified river section would be subject to regulations deemed necessary by the Secretary of Agriculture for protection of the river values. Geothermal development would be affected but will not be prohibited.

The effect of designation on livestock grazing and wildlife, including the eagle, would be the same as described for river segment B under Alternative B. Grazing will be permitted and the opportunity for wildlife habitat enhancement would be increased.

The effect of designation on operation and maintenance of existing facilities would be the same as described for river segment B under Alternative B. Deviation from current methods of operation and maintenance that adversely affects the natural character of the area could be prohibited.

The designation of any part of the Verde River in the National Wild and Scenic Rivers System should increase recreation use. Wild and scenic classification of river segment B would tend to increase the number of out of state users, and recreation classification of river segment A with improved access would tend to increase state and local users.

This alternative protects the free-flowing nature and outstanding values of river segment B and all but 5.5 miles of segment A. The river section excluded from designation contains a high percentage of private lands.

4. Alternative D. Under this alternative, all of the eligible river segments would be designated. The 5.5 mile river section between the west Forest boundary and the Verde Ranch would be classified as recreation resulting in total recreational classification for river segement A. River segment B would be classified as scenic and wild as in Alternative C.

The effects of implementing this alternative would be essentially the same as for Alternative C with the added impacts of additional private lands. Scenic easements or zoning restrictions would be required on private lands that lie along 4 miles of the designated 5.5 mile river section.

This alternative protects the free-flowing nature and outstanding values of the two Verde River segments designated for study in the Wild and Scenic Rivers Act, as amended.

D. Relationships Between Short-Term Uses and Long-Term Productivity

1. Alternative A. No loss in long-term productivity of the environment would result from short-term uses in the foreseeable future under this alternative.

   This alternative would allow for dams and other developments that could affect the free-flowing nature of the river. These developments could reduce long-term productivity of the river in providing water-based recreation derived from the free-flowing condition of the river. However, these same developments could provide long-term productivity of hydroelectric power, irrigation water, and recreation activities oriented around the use of lakes created by a dam.

2. Alternative B. The short-term uses planned under this alternative would not affect long-term productivity. This alternative designates only segment B of the river between Beasley Flats and Table Mountain. Therefore, potential for water storage and/or power production in segment B would be legislatively removed for the foreseeable future but would remain a potential long-term option. Some opportunities for intensive or incompatible development on one parcel of private land may be eliminated by zoning ordinances or by Federal acquisition of scenic easements. A very small acreage would be committed to roads, trails, parking and sanitation facilities.

   The relationship between short-term uses and long-term productivity in river segment A between the west Forest boundary and Clarkdale is the same as Alternative A.

3. Alternative C. This alternative designates all but 5.5 miles of the river within the study area. The constraints on potential water developments within the classified river sections are the same as for Alternative B. This alternative affects 4 additional private land parcels, thus more development options would be foregone. This alternative commits additional acres to roads, parking and sanitation facilities, removing this land from vegetative production.

4. Alternative D. This alternative designates all eligible river segments; therefore, constraints on water developments would be placed on the entire study length. Under this alternative all private landowners could be affected by zoning ordinances or scenic easement acquisition. This alternative would also commit additional acres to roads, parking and sanitation facilities.

E. Summary of Probable Adverse Environmental Effects Which Cannot Be Avoided

1. Alternative A. The probable adverse environmental effects under Alternative A are limited. Additional subdivision of the private lands within the study area could occur. Unless carefully planned, subdivision development can have adverse effects on visual qualities, wildlife habitat, and recreation experiences in the immediate river area. Long-term probable adverse environmental effects are not expected, but could result from implementation of economic development options (reservoirs, highways, etc.) which could occur under this alternative.

2. Alternative B. The probable adverse environmental effects under this alternative are also quite limited. Some modification of the natural environment would occur with the improved road and trail access and the additional parking and sanitation facilities needed in river segment B between Beasley Flats and Table Mountain. Development options on the private land could be constrained by zoning ordinances or Federal purchase of development rights.

3. Alternative C. The probable adverse environmental effects are the same as in Alternative B except additional private land rights could be constrained. Also, some modification of the natural environment would occur because of road construction, trail construction, and additional parking and sanitation needs.

4. Alternative D. The probable adverse environmental effects are the same as Alternative B except all private land parcels within the study area could be affected by scenic easements or local zoning.

F. Irreversible or Irretrievable Commitment of Resources

1. Alternative A. None of the activities proposed under this alternative would result in short-term irreversible or irretrievable commitment of resources.

   Economic developments which could occur under this alternative in the future (water storage, hydroelectric development, highway construction, utility corridors, mining) could result in irreversible or irretrievable commitment of resources but would be addressed after specific proposals have been made, through the environmental analysis process.

2. Alternatives B, C, and D. Designation into the National Wild and Scenic Rivers System does not constitute an irreversible or irretrievable commitment for the future, as Congress has the authority to change or rescind the designation if the need occurs. Zoning ordinances could be changed or eliminated and scenic easements could be returned to landowners. The improved roads, trails, and parking areas could be considered as an irreversible commitment of the lands upon which they are constructed.

VI. EVALUATION OF ALTERNATIVES

In Table 9 the four alternatives are evaluated using the criteria outlined in Section III, C. The ratings used to measure the degree to which the alternatives meet the criteria are for relative comparison purposes only and should not be interpreted to mean absolute criteria attainment. Table 9 is used for a horizontal comparison of the alternatives for each evaluation criterion. The ratings must not be added vertically because the evaluation criteria are not equally important.

TABLE 9

EVALUATION OF ALTERNATIVES

CRITERIA	ALTERNATIVES A	B	C	D
1. Preserving free-flowing conditions and outstandingly remarkable characteristics of the river and its immediate environment.	-	0	++	++
2. Conform to availability and suitability of those lands involved.	+	+	+	+
3. Minimize impacts on private land rights.	++	+	-	- 1/
4. Display high degree of compatibility with desire and recommendations of State and local governments.	0	0	0	0
5. Increase supply of outdoor recreation opportunities and services through Forest Service programs that emphasize dispersed recreation.	0	+	++	++
6. Provide a mix of goods and services responsive to local area economic growth.	+	0	-	-
7. Ensure protection and enhancement of habitat for threatened and endangered wildlife species.	0	+	++	++

++ Alternative meets the criteria to a high degree.
+ Alternative meets the criteria to a moderate degree.
0 Alternative meets the criteria to a minimal degree.
- Alternative does not meet the criteria.

1/ Neither Alternative C or D meets the minimum criteria. Alternative D has twice the impact on private land as Alternative C.

Following is a detailed discussion of the summarized information in Table 9.

Criterion 1. Alternative D obviously meets the intent of the Wild and Scenic Rivers Act. Even though Alternative C excludes 5.5 miles of river, it still meets the criterion to a high degree. Alternative B also meets the intent of the Act but to a lesser degree. Alternative A does not provide for long-term free-flowing conditions or protection of outstandingly remarkable values for any portion of the river; therefore, it does not meet this criterion.

Criterion 2. All four alternatives were designated to conform to the availability and suitability of the lands involved; therefore, they all equally meet this criterion. However, the present, undeveloped primitive condition of the river and its immediate environment makes it available and suitable for protection of its free-flowing character and associated values under the National Wild and Scenic Rivers System.

Criterion 3. River designation could result in some loss of development rights by private landowners. Alternative B may require a scenic easement or zoning restrictions on a portion of the Brown Springs private property although these restrictions are not essential they may be desirable. This loss of private land development rights would be relatively minor when compared to Alternatives C and D. Alternative C could impact 737 acres of private lands and Alternative D could impact 1,500 acres of private lands and twelve landowners. Alternative A is preferred by local landowners because it recommends no designation and would have no impact on landownership rights.

Designation in the National Wild and Scenic Rivers System would also place some constraints on the general public. For example, vehicle use would be restricted to designated roads within the river corridor. These restrictions would be viewed by local river users as impacts on their rights to use the river.

Criterion 4. There were seven state agencies that supported designation of the river and seven that did not indicate a preference. The Arizona State Land Department indicated that designation of the river would be premature at this time. They stated that until the watershed has been adjudicated and the water rights of the State of Arizona, including claims to CAP water, has been fixed by court decree, the State Land Department must protest any proposal which may adversely impact the claims of the State.

The Arizona Game and Fish Department strongly supports designation under Alternative C. The Department feels that designation would provide the needed riparian habitat protection, zoning restrictions and enhance the department's efforts to reestablish the river otter.

Comments received from the Arizona Outdoor Recreation Coordinating Commission support the Wild and Scenic River designation. The commission emphasizes the limited opportunities for recreation on free-flowing

rivers in Arizona and believe protection of these rivers is needed as the state's "continued economic and population growth exert increasing pressure on the state's limited resources".

Most of the river's study corridor is located within Yavapai County. Approximately 17 miles along the east side of the river between the junction of Fossil Creek and Table Mountain is located in Gila County. Throughout the study process Gila County has stated its preference for no designation (Alternative A). Reasons include opposition to any classification action which would restrict or reduce present multiple-use of Gila County resources or increase county custodial services and cost, such as Search and Rescue Operations. Yavapai County Board of Supervisors were aware of the river study but did not comment.

The Prescott City Council supports designation of the river under Alternative C. The council stated that this alternative "would avoid or, at least minimize any potential conflict with the future use of Prescott's water needs."

Local ranching interests favor Alternative A, the no designation alternative. They have expressed the concern that there could be restrictions on grazing which would affect the local ranching economy.

Comments received on the Draft Environmental Statement from residents of the Verde Valley indicated 84 percent were in favor of no designation. A summary of all comments received indicates a preference of 51 percent for designation.

Criterion 5. All of the alternatives assure a short-term continuance of dispersed recreation management along the Verde River. However, only Alternatives B, C, and D that contain designated river segments assure dispersed recreation emphasis over the long term. Alternative B designates 38.5 miles of the river's study length and meets the criterion to a moderate degree when compared to Alternatives C and D, which designates for 72.5 miles and 78 miles respectively.

The specific capacities and demands for dispersed recreation use along the Verde River are not currently known. However, it can be anticipated that, at some point in the future, demand will exceed capacity under all alternatives. Alternative A would provide the opportunity for reservoir development and thus increase the capacity for reservoir-related opportunities, while at the same time reducing the opportunities for dispersed recreation use associated with a free-flowing river.

Criterion 6. River designation would have little or no effect on grazing or water outputs on the Tonto, Prescott or Coconino National Forests. Also, the action would not change the Forest's ability to meet rapidly-changing local needs. Designation over the long term could have a minor negative effect on mineral and energy development. Also, river designation prevents some recreation development and

private land development opportunities which could increase revenues in Yavapai and Gila Counties to some degree.

Alternative A best meets this criterion because it does not eliminate future options for development on National Forest and private lands. Alternative B meets this criterion to a higher degree than C or D because river segment A between the Forest boundary and Clarkdale remains open for development.

Criterion 7. Protection and enhancement of habitat for threatened and endangered wildlife species are achieved by all four alternatives. The emphasis currently being placed on management of the riparian resource along the Verde River is the result of a plan prepared by the Tonto, Prescott and Coconino National Forests to resolve livestock-riparian conflicts. The plan contains a development program which is designed to promote the establishment of cottonwood regeneration along the river channel. The exclusion of livestock during the seedling (cutting) establishment period is expected to enhance the habitat for both threatened and endangered and other wildlife species. The program prescribed by the plan will continue to be implemented whether or not the river is designated. River designation could constrain some proposed improvements, but little effect is anticipated.

Scenic easements or zoning restrictions required by Alternatives C and D would prevent development of private lands along the river's edge, reserving these sites for production of riparian vegetation. The private land parcel in Alternative B does not extend to the river's edge; therefore, the potential for destroying riparian habitat does not exist.

River designation with the recommended improved access would increase the number of recreation visitors. This increase could have an adverse impact on wildlife, specifically the nesting bald eagle. The Forest Service is currently placing restrictions on the using public during critical nesting periods. This practice is expected to continue whether or not the river is designated.

Designation under Alternatives B, C and D would ensure protection of the existing eagle habitat by precluding dam construction and excessive diversions on portions of the river. Under Alternatives C and D, river segments B and all or part of river segment A would be designated. These two alternatives would provide more protection ensurance for a greater length of river than Alternative B which only designates river segment B. It should be noted that river segment B contains established eagle nesting territories. None have been recognized in river segment A.

VII. IDENTIFICATION OF THE PREFERRED ALTERNATIVE

A. Preferred Alternative.

Alternative B is the preferred alternative. This would classify 17.5 miles of the river as wild and 22 miles as scenic. The total area designated as components of the Wild and Scenic Rivers System would encompass about 12,640 acres of which 26 are private, and 12,614 are National Forest System lands. The estimated cost of the action over a 10-year period excluding annual maintenance, is $220,500. The Forest Service would administer the designated river component and bear would all costs of the recommended action. State and local agencies would be asked to support the designation. See preferred alternative map, page iv.

Alternative B is a compromise between local desires and other public interests. Designation under this alternative would preserve the most prestine segment of the Verde River for future generations. It would also reduce the impacts on private landowners and keep the options open for flood control and exchange of CAP water.

The reasons for selection of Alternative B, which is a change from the preferred alternative in the Draft Environmental Impact Statement (Alternative C), are as follows:

1. The local public (Verde Valley) expressed strong opposition to designation. The Valley residents represented over 46 percent of the total respondents to the Draft Environmental Impact Statement of which 84 percent preferred no designation. The reasons given varied from "get out-leave us alone" to concern for excluding future developments.

2. The cost of implementing Alternative C ($1,693,700) was questioned by several respondents. Those that preferred designation questioned if the expenditures were necessary. The respondents that preferred to continue current management indicated the cost of implementation was exorbitant and that the American people could not afford the expense at this time.

3. There was a concern that designation would hinder or preclude a possible exchange of Central Arizona Project water with Salt River Project water along the Verde River. This was expressed by several respondents including the Arizona State Land Department and the Department of Interior - Water and Power Resources Service. See discussion on Central Arizona Project in Appendix D.

4. The Central Arizona Water Control Study should resolve the Phoenix Valley flooding problems. However, the flooding of the Verde Valley will continue unless some action is taken. The current flood control study involving the old Clarkdale Dam

site in river segment A has not been released to the public. See CAWCS summary in Appendix C.

5. All private landowners within the river study corridor that responded to the Draft Environmental Impact Statement objected to designation because of the loss of private ownership rights through scenic easements. With the exception of one 26-acre parcel, all private lands involved (1474 acres) are located in river segment A. While desirable, the acquisition of scenic easements or county zoning on segments is not essential for management as a designated river.

6. Many non-Verde Valley respondents that preferred designation gave examples of their personal experiences in river segment B. Some stated they had not yet seen or used the river but would like to keep it free-flowing for future generations. It was apparent from the comments that river segment A receives more use by local residents that by other publics.

Alternative B meets all seven of the selection criteria to a moderate or minimal degree. It presents a reasonable mix of outputs requested or expected by the public. The action would preserve the free-flowing condition and the outstandingly remarkable characteristics of the river segment between Beasley Flats and Table Mountain. It would increase the opportunities for dispersed recreation and protection and enhancement of threatened and endangered wildlife species and plants.

The alternative conforms to the availability and suitability of the lands involved.

Local and County governments were divided with Prescott Town Council favoring designation and Gila County favoring no designation. The responding state agencies that provided substantial comments were also split. The Arizona Game and Fish Department and the Arizona Recreation Coordinating Commission supports designation, whereas the State Land Department prefers deferring action until water rights have been determined and CAP allocations made.

Designation would impose minor restrictions on lands currently open for mining exploration and mineral leasing. Off-road vehicle use would be prohibited. However, this loss to the local economy would be more than offset by income generated by increased recreation use.

B. Reason for Non-selection.

Alternative A. This alternative was not selected because it does not insure preservation of any portion of the river in a free-flowing condition, nor would it provide maximum protection for the outstandingly remarkable values. Also, this alternative would not greatly enhance dispersed recreational opportunities, because the funding of improved access and construction of support facilities would receive a relatively low priority without designation of the river.

The alternative meets only one of the selection criteria to a high degree and three to a moderate degree. It would eliminate the impacts of designation on private lands and permit development along the river, which could provide a mix of goods and services to the local area economy.

Alternatives C and D. The criteria evaluation table indicates that Alternatives C and D are rated the same. This is not surprising since the only difference between the alternatives is the designation of the uppermost 5.5 miles of the river. Alternative D satisfies criteria 1, 5, and 7, to a slightly higher degree than Alternative C. However, this satisfaction is offset by criteria 3, where the biggest difference between the two alternatives exists. Since 4 miles of the 5.5 mile section is in private ownership, Alternative D would restrict development on almost twice as many acres of private lands (1,500 acres) as Alternative C, and substantially increase costs associated with obtaining access and scenic easements. Designation of the private land river section would also increase the cost of management plan preparation and decrease the local tax base. Both Alternatives C and D would preclude or restrict flood control and CAP water exchange activities.

Alternative Eliminated (Alternative E). It was determined during the study that the river section between Table Mountain and Tangle Creek qualifies for inclusion in the National Wild and Scenic Rivers System. The only reason the 10.5 mile section was not added to river segment B and recommended for designation under Alternative B was because the effects were not evaluated and presented to the public in the Draft Environmental Statement. We received comments from 73 respondents requesting that the river section be added to Alternative C or D for consideration.

C. Management Plan.

If the Verde River is designated as a component of the National Wild and Scenic Rivers System, a management plan would be prepared. The objectives of the plan would be to protect and enhance the values which enabled the river to be added to the National System and at the same time, produce minimum impacts on private landowners and existing land use practices.

As a minimum, the management plan would contain the following:

1. Specific boundaries of the designated river segments.

2. A determination of instream-flow needs for Wild and Scenic River purposes.

3. River access system including sanitation and parking facilities.

4. Measures for protection of fish and wildlife resources with particular attention given to the bald eagle and riparian habitat.

5. Measures for protection of scenic, historic and cultural values.

6. An evaluation of private land to determine scenic easement and/or zoning ordinance requirements.

7. A determination of recreation use capacity and controls including off-road vehicle use.

8. An evaluation of public safety requirements.

9. A pollution monitoring system.

10. Measures for protecting water quality.

11. Fire protection considerations.

12. Recurring operation and maintenance needs including law enforcement requirements.

13. Coordination with State, county, and local governments.

VIII. CONSULTATION WITH OTHERS

A. Summary of Public Involvement

Public involvement for the study followed the Public Involvement Plan developed to coordinate information dissemination and public participation for simultaneous study of the Salt, San Francisco and Verde Rivers. In March 1979 an issue-scoping meeting was held with Federal and State agency representatives to discuss the study of the three rivers. At this time, initial issues and concerns of these agencies were identified. Represented at the meeting were 19 agencies, Office of the Governor and three Congressmen. Also in March, key citizens and county governments were briefed on the study process and Congressional direction. An issue-scoping meeting was held in April 1979, for representatives of typical statewide user groups and organizations such as ranchers, hikers, campers, river runners, timber industry, environmentalists, outdoor writers, etc. Representatives from 14 organizations and groups attended this meeting.

A public open house was held in Mesa, Arizona in May 1979, to discuss the study and public concerns on the three Arizona rivers. The open house was attended by 16 people. Also in May, an open house was held in Camp Verde, Arizona to discuss specifically the study and public concerns relating to the Verde River. This open house was attended by seven people. Individual briefings on possible impacts of the study were also held with congressional representatives in Phoenix during this period.

All these initial public participation opportunities were announced in advance through statewide and local news media, personal contacts with key individuals, local government officials, organization leaders, and announcement in the Federal Register. A special effort was made to utilize printed and electronic news media for dissemination of information concerning the study.

A briefing was presented on the study of the Verde River at the Yavapai County Board of Supervisor's Meeting in March 1979. The County was invited to participate in developing the eligibility criteria to be used in evaluating the three rivers.

On September 19, 1979, a workshop was held in Phoenix, Arizona to receive input on the eligibility criteria for the three Arizona rivers. The workshop was attended by 42 people representing Federal, State and local government agencies, affected counties, statewide organizations and user groups.

In November 1979, an array of alternatives that considered designation and non-designation of the rivers was presented to the

public by publication of a Forest Service produced Wild and Scenic Rivers newspaper. Included in the newspaper were descriptions of the alternatives with maps, franked return mail comment sheets, and information on public open house meetings scheduled for December 1979. Over 3,000 copies of the newspaper were distributed.

The open house public meetings held in December 1979 in Phoenix and Camp Verde were attended by 78 people. The newspaper and December open house meetings resulted in 77 written comments concerning the Verde River Wild and Scenic Rivers Study.

Throughout the study process there have been multiple contacts with range permittees, landowners, civic organizations, local government representatives and other interested individuals.

The contact methods varied, depending on the anticipated public interest. A radio talk show conducted in Cottonwood, Arizona, prior to the December Verde River open house meeting, produced the largest public audience.

The Draft Environmental Impact Statement was released to the public in August 1980. During the 90-day review period, the study received considerable newspaper, radio and television publicity in the Phoenix, Flagstaff, Prescott and Camp Verde areas. Individual meetings were held with interested private land owners, range permittees, groups, organizations and agencies.

B. Summary of Comments Received

The participants at the September 1979 eligibility criteria workshop expressed their opinion that the Verde River, being a free-flowing river located in the semi-arid southwestern region, was in itself, unique. Workshop participants determined that the river has outstanding scenic, fish and wildlife, historic and cultural values.

A total of 379 written responses were received on the Draft Environmental Impact Statement. Substantive input by some respondents resulted in changes in the statement including selection of a new preferred alternative.

Tables 10 and 11 provide a brief summary of the respondents by alternative preference and their residence.

TABLE 10

SUMMARY OF RESPONDENTS

BY ALTERNATIVE PREFERENCE

Respondent Represented	Total Respondents	Alternatives					
		A	B	C	D	2/	Unknown
Federal Agencies	10			1			9
Congressional Delegates	1	1					
Arizona State Agencies	15	1		6	1		7
State Elected Officials	0						
Counties	1	1					
County-Elected Officials	0						
Town & City Councils	1			1			
Indian Tribes	0						
Corporations	4	2					2
Organizations	19	2	2	6		9	
Individuals	332	164	2	75	27	64	
Total	383 1/	171	4	89	28	73	18

1/ There were 379 respondents to the Draft Environmental Statement. Gila County, Prescott City Council, Arizona Outdoor Recreation Coordinating Commission and the Southern Environmental Council responded prior to completion of the draft.

2/ These respondents preferred either Alternative C or D plus designating the additional 10.5 miles of river between Table Mountain and Sheep Bridge.

TABLE 11

RESIDENCE OF INDIVIDUAL RESPONDENTS

BY ALTERNATIVE PREFERENCE

	Total Respondents	Alternatives A	B	C	D	1/
Bellemont, AZ	1					1
Bisbee, AZ	1					1
Camp Verde, AZ	78	75	1	2		
Carefree, AZ	1			1		
Chino Valley, AZ	17					17
Clarkdale, AZ	4	2		2		
Cornville, AZ	3	3				
Cottonwood, AZ	35	32		3		
Dewey, AZ	1	1				
Douglas, AZ	1					1
Flagstaff, AZ	16		1	3	3	9
Fredonia, AZ	1	1				
Kayenta, AZ	1					1
Lake Montezuma, AZ	7	7				
McNeal, AZ	1					1
Mesa, AZ	7	6				1
Page, AZ	1	1				
Paradise Valley, AZ	1					1
Paulden, AZ	1					1
Phoenix, AZ	17	7		4	1	5
Prescott, AZ	76	3		49	19	5
Prescott Valley, AZ	1			1		
Rimrock, AZ	5	3		1		1
Scottsdale, AZ	3	2				1
Sedona, AZ	17	4		3		10
Sun City West, AZ	7	7				
Sun Lakes, AZ	1	1				
Tempe, AZ	6	3		1		2
Thatcher, AZ	1	1				
Tuba City, AZ	1					1
Tucson, AZ	10	1		1	4	4
Yuma, AZ	1	1				
Juneau, AK	1			1		
San Francisco, CA	1					1
San Mateo, CA	1			1		
Unknown	5	3		2		
TOTAL	332	164	2	75	27	64

1/ These individual respondents preferred either Alternative C or D plus designating the additional 10.5 miles of river between Table Mountain and Sheep Bridge.

For purpose of analysis, the respondents were divided into two groups. The local group is represented by Camp Verde, Cottonwood, Sedona and communities within and surrounding the Verde Valley. All other comments were analyzed together in the second group.

The local public indicated a strong preference for Alternative A with less than 16 percent favoring designation. Other than local respondents indicated a strong preference for designation with less than 21 percent favoring Alternative A. Combining all individual comments received, slightly over 50 percent preferred one of the designation alternatives (Alternative C was the most frequently preferred).

The most frequent reasons given for preference of a given alternative are summarized as follows:

Alternative A

- Retains multiple-use management option.
- Provides for no change, keeps the river as it is.
- Not in favor of adding additional government regulation or controls to the river.
- Provides least interference with private landowner's rights.
- Provides more opportunity for economic development flexibility.
- Designation would hinder needed flood control action.
- Keeps more options open for energy development.
- Designation would be a further burden on the taxpayer.
- Designation would increase recreation use which would increase pollution and other adverse use effects.
- Continuation of present management is the best way to protect and reduce adverse impacts on wildlife.

Alternative B

- Designation of the full length of the river would interfere with private ownership rights and traditional uses.
- River segment A is not conducive to most forms of river running.
- This alternative will protect the beautiful lower reaches of the Verde River and the bald eagle.
- The landforms in river segment A are not exceptionally beautiful.

Alternative C

- This alternative will protect some of the few remaining riparian areas in Arizona.
- Continuing current management will eventually erode the quality of the existing riparian habitat.
- Provides protection for wildlife including threatened and endangered species.
- Designation recognizes the recreation values and opportunities of the river.
- This alternative preserves the river in its free-flowing condition.
- Designation will preserve the river for future generations.
- The river has outstanding scenic beauty which needs to be protected and preserved.
- This alternative prevents development along the river.
- Less impact on private landowners than Alternative D.

Alternative D

- Designation will protect the scenic, geologic and aesthetic values.
- Provides protection for threatened, endangered and other wildlife species.
- The recreation values are worthy of protection.
- It is important to preserve the wilderness values.
- The remaining few free-flowing rivers should be protected and remain free-flowing.
- It is important to preserve riparian habitat because a large portion has already been lost.
- Entire Verde River should be designated regardless of private ownership.
- Opposed to dams or power plants, there is already abundant power available for Arizona.

Alternative C or D Plus Designation of 10.5 Miles Between Table Mountain and Sheep Bridge

- Provides protection for threatened, endangered or special interest wildlife species - maximum river designation.
- The maximum amount of the river's length should be protected for riparian values considering the small amount currently protected in Arizona.
- Provides maximum recreation opportunities such as hiking, swimming, floating, etc.
- The area contains many sites of historical and cultural values.
- Preserves the free-flowing river.
- Preserves the beauty of the river.
- Let's keep the last one for future generations to enjoy.
- Preserves the river in its natural state.
- The best way to keep the river the way it is is to put it into the National Wild and Scenic Rivers System and maintain the status quo.

The information provided in the preceding portion of this section should not be analyzed as a vote count, but considered a reflection of concerns and a rough indicator of public sentiment toward management of the Verde River. The following conclusions were drawn concerning public response to the Draft Environmental Statement:

1. Private Landowner Rights - A high percentage of the respondents that preferred Alternative A gave the loss of private landowner rights as their reason for non-designation of the river. They expressed their feelings that a private landowner is already faced with too many government controls and that additional development constraints are not needed. All private landowners in the study area that responded to the Draft Environmental Statement expressed their preference for Alternative A.

2. Transportation Development - Several respondents expressed their feelings that additional access routes to the river were not needed. However, some improvement of the existing roads and trails would be desirable if it could be done without increasing the use. There is a concern that increased use will degrade the riverine environment.

3. Recreation Development - There were few responses indicating a need for developing recreation facilities. Most respondents preferred "keeping the river as it is today" serving dispersed recreation users.

4. Multiple Use - Considerable support was expressed for a continuation of present management under Alternative A. Several respondents indicated they would like to see future options left open for geothermal development, oil and gas exploration, mineral extraction and hydroelectric power development.

5. Protection of the River - Respondents that preferred designation and those that did not used "protection of the river" as their reason. Some were satisfied with the protection provided by current management and others preferred Congressional designation to protect the river values. The local public (Verde Valley) expressed a strong preference for continuing current management direction.

6. Wilderness - Wild and Scenic Rivers - Several of the respondents that preferred designation, expressed a desire to keep the river, especially the South Segment (river segment B), in a near wilderness state. The major reasons given were to preserve the river for future generations, protect the wildlife and riparian vegetation, and preserve the natural beauty of the area.

7. Increased Recreation Use - In general, there was a strong opposition to any action that would increase recreation use along the river. The respondents cautioned the Forest Service that increased use could adversely effect the nesting bald eagle population and cause deterioration of the riparian habitat.

8. Protection of the Bald Eagle - Many of the respondents that preferred designation stated protection of the eagle as their reason. They felt that designation would add emphasis to management of threatened and endangered species.

9. Flood Control Needs - Considerable opposition to designation was expressed by Verde Valley residents because it would preclude flood control dams along the river. Excessive flooding has occurred during the past three years which resulted in soil loss and damage to private property. They expressed a strong desire to keep the option open for construction of flood control facilities. See discussion in Appendix C.

10. CAP Water Exchange with SRP - Several agencies and individuals commented they would like to see the option left open to exchange Central Arizona Project water with Salt River Project

water. They felt that designation would hinder or prevent an exchange. See discussion in Appendix D.

11. Keep the River As It Is - This statement was made by many respondents that indicated a preference for Alternative A. In many cases, the same respondent stated they did not want any changes in the river. Statements of this type were difficult to evaluate because of the apparent conflict with the Forest Service selected alternative presented in the Draft Environmental Impact Statement. Alternative A would permit dams and diversions which could dry up the river during heavy use periods. This could change the entire river environment. On the other hand, designation under Alternatives B, C and D would preserve the free-flowing nature of the river and thus be more responsive to "keeping the river as it is."

Several federal and state agencies and organizations responded to the Draft Environmental Statement. Their comments and the Forest Service responses to the comments are included in appendix F of this document.