



**U.S. Department of the Interior
Bureau of Land Management**

Arizona State Office

December 1994



FINAL

**Arizona Statewide Wild and Scenic Rivers
Legislative Environmental Impact Statement**



The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield; a combination of uses that take into account the long term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness and natural, scenic, scientific and cultural values.

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**ARIZONA WILD AND SCENIC RIVERS
FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
RIVERS APPENDIX**

Bureau of Land Management, 1994

**ARIZONA WILD AND SCENIC RIVER FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
WILD AND SCENIC RIVER STUDY AREA RIVER APPENDIX**

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INTRODUCTION

The river appendix contains 20 individual environmental impact statements. Each is designed as a stand-alone document and, by its inclusion in this appendix to the Arizona Statewide Wild and Scenic Rivers Environmental Impact Statement, is available for public review and comment.

The purpose and need for the action on each river study area is similar. Specific portions of the subject waterways were identified in resource management plans or resource management plan amendments as eligible for further study in the wild and scenic river evaluation process. The purpose of the action in each case is to determine the suitability for recommending the eligible portions of the river to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 which contains the following stipulation. "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas, and all river basin and project plan reports submitted to the Congress shall consider and discuss any such potentials. The Secretary of the Interior and the Secretary of Agriculture shall make specific studies and investigations to determine which additional wild, scenic, and recreational river areas within the United States shall be evaluated in planning reports by all Federal agencies as potential alternative uses of the water and related land resources involved" (P.L. 90-542, Sec. 5(d)).

The action on each river study area also complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

BACKGROUND

In developing resource management plans, Arizona Bureau of Land Management personnel

identified a need to inventory and classify rivers in the resource areas and districts in order to develop management strategies and techniques to protect the river's resource values.

As a result, the Bureau of Land Management conducted eligibility evaluations to identify rivers with free flowing characteristics and outstandingly remarkable values. By 1993, 20 river study areas had been evaluated.

Waterways in the study areas were assigned tentative classifications for management as wild, scenic, or recreational on the basis of criteria in the Wild and Scenic Rivers Act.

(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. (P.L. 90-342, Sec. 2(b)).

The Bureau of Land Management defined management objectives and standards for the three categories of rivers. The following summarizes the management objectives and standards in the Bureau of Land Management *Manual 8351 - Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, and Management*. Copies of the Manual are available for reference in the Arizona Bureau of Land Management field offices.

(1) Wild Rivers:

Management of wild river areas should give primary emphasis to protecting the values which make it outstandingly remarkable while providing river-related outdoor recreation opportunities in a primitive setting.

Allowable management practices might include construction of minor structures for ... [improvement of fish and game habitat, grazing protection from fire, insects, or disease, rehabilitation or stabilization of damaged resources], provided the area will remain natural appearing and the practices or structures are compatible and in harmony with the environment. Developments such as trail bridges, occasional fencing, natural-appearing water diversions, ditches, flow measurement or other water management devices, and similar facilities may be permitted if they are unobtrusive and do not have a significant direct and adverse effect on the natural character of the river area" (MS 8351.51A).

(2) Scenic Rivers:

Management of scenic river areas should maintain and provide outdoor recreation opportunities in a near-natural setting. The basic distinctions between a "wild" and a "scenic" river area are the degree of development, types of land use, and road accessibility. In general, a wide range of agricultural, water management, silvicultural, and other practices or structures could be compatible with scenic river values, providing such practices or structures are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment.

The same considerations set forth for wild river areas should be considered, except that motorized vehicle use may, in some cases, be appropriate and that development of larger scale public-use facilities within the river area, such as moderate-sized campgrounds, interpretive centers, or administrative

headquarters would be compatible if such facilities were screened from the river" (MS 8351.51B).

(3) Recreational Rivers:

Management of recreational river areas should give primary emphasis to protecting the values which make it outstandingly remarkable while providing river-related outdoor recreation opportunities in a recreational setting. Recreational classification is a determination of the level of development and does not prescribe or assume recreation development or enhancement. Management of recreational river areas can and should maintain and provide outdoor recreation opportunities. The basic distinctions between a "scenic" and a "recreational" river area are the degree of access, extent of shoreline development, historical impoundment or diversion, and types of land use. In general, a variety of agricultural, water management, silvicultural, recreational, and other practices or structures are compatible with recreational river values, providing such practices or structures are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment.

Recreation facilities may be established in proximity to the river, although recreational river classification does not require extensive recreational development. Recreational facilities may still be kept to a minimum, with visitor services provided outside the river area. Future construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would not be permitted except in instances where such developments would not have a direct and adverse effect on the river and its immediate environment (MS 8351.51C).

Preliminary suitability assessments were prepared for the State Director's review. All or parts of 13 river study areas were found to be suitable in the preliminary assessment. The State Director concluded that the preliminary assessment would be the proposed action alternative of the Bureau of Land Management.

By March, 1994 the Bureau of Land Management had completed preparation of a draft environmental impact statement in which the impacts of implementing the proposed action and other alternatives were analyzed. The draft environmental impact statement was issued for a 90-day public review and comment period early in April, 1994. Bureau of Land Management personnel examined the oral and written responses and identified the recommended alternative. This recommended alternative is analyzed, and its impacts evaluated in each of the 20 environmental statements in this river appendix.

MANAGEMENT

The Bureau of Land Management's Arizona public lands are administered by a state office, four district offices, and ten resource area offices.

The Arizona Strip District

The Arizona Strip District administers nearly 2.9 million acres, or more than 54 percent of the 5.3 million-acre Arizona Strip area composed of lands north and west of the Colorado River to the Utah State border and west to the Nevada border. The district and field offices are in St. George, Utah.

The Arizona Strip District administers land in two of the wild and scenic river study areas.

The Virgin River Study Area is administered by the Shivwits Resource Area, Arizona Strip District. The Paria River Wild and Scenic River Study Area is administered by the Vermillion Resource Area, Arizona Strip District.

The Phoenix District

The Phoenix District consists of approximately 7.1 million acres of land generally located in the central and western portions of the state. The district has three field offices, each responsible for a different geographical subarea. Eight wild and scenic river study areas are managed by the Phoenix District.

Five of these are in the Kingman Resource Area which covers about 2.6 million acres in west central Arizona. The study areas include the Big Sandy River, Burro Creek, Francis Creek, the Santa Maria River, and Wright Creek.

The Phoenix Resource Area manages nearly 750,000 acres of public lands in central and eastern Arizona. Three of the wild and scenic river study areas are administered by this resource area. They are the Agua Fria River, the Hassayampa River, and the Middle Gila River below Coolidge dam.

The third Phoenix District field office, the Lower Gila Resource Area, manages over 3.7 million acres in west central Arizona. No river areas in this Resource Area were found to be eligible.

The Yuma District

The Yuma District covers nearly 2.5 million acres of public land in western Arizona and about 80,000 acres in California. The Havasu Resource Area, Yuma District, manages lands in the Bill Williams river study area. There are no eligible river study areas in the other Yuma District field office, the Yuma Resource Area.

The Safford District

The Safford District covers approximately 1.8 million acres of public land in southeastern Arizona from Tucson east to the New Mexico border and south from Winkelman to the Mexican border. Nine river study areas are in the Safford District.

The Gila Resource Area, one of three field offices in the Safford District, manages five river study areas. These are the Aravaipa Creek, Bonita Creek, Gila River: Gila Box, Lower San Francisco River: Gila Box, and Turkey Creek.

Four river study areas are administered by the Tucson Resource Area. They include Cienega Creek, Hot Springs Canyon, the San Pedro River, and Swamp Springs Canyon.

No river areas were determined to be suitable in the third Safford field office, the San Simon Resource Area.

THE ENVIRONMENTAL IMPACT STATEMENTS

The environmental impact statements are not decision documents. They are parts of decision making packages. The environmental impact statement, however, is important because it is developed around a public involvement process.

The process begins with public scoping meetings centering on significant issues identified by affected groups. These include public, federal, state and local agencies, and Indian tribal groups. The process continues with a public review and hearings on the draft document. A final environmental impact statement, incorporating public review comments, is made available to the public prior to the final decision.

After public review of the final legislative environmental impact statement the document will be forwarded to the Department of the Interior and then to the President and Congress for decisions.

The following paragraphs address several items that identified by the public as needing further clarification.

1. In the final legislative environmental impact statements included in this appendix major modifications and additions to the text of the draft document are shown by bold print.
2. In the maps, segments identified by letters have been changed to numbers for consistency.
3. In the draft Kingman Resource Area Resource Management Plan (1990) the eligible portion of the Bill Williams River was

described as "Beginning immediately downstream from Alamo Dam to the resource area boundary...." Though not specifically mentioned, this eligibility boundary coincides with the east boundary of the Rawhide Wilderness.

Subsequent documents, i.e.: the Final Kingman Resource Management Plan (1993), the Suitability Assessment (1993) for the Bill Williams River, and the Bill Williams River Draft Environmental Impact Statement (1994), also described the segment as beginning at Alamo Dam.

In response to the Draft Wild and Scenic River Legislative Environmental Impact Statement, the Army Corps of Engineers noted that the proper boundary for the Bill Williams Wild and Scenic River Study Area begins at the edge of the Alamo Dam withdrawal, since the Bureau of Land Management does not have primary management responsibility of this reach (Public Land Order 492). This recommendation moves the wild and scenic river boundary into the Rawhide Wilderness.

As a result, the boundary has been revised in the recommended alternative. This change also applies to the Big Sandy and Santa Maria Rivers (each also terminates at the Alamo Dam Withdrawal). Since these revisions have not create differences in the river study area management or have significant impacts on river values, no other changes related to this issue were made.

4. Where grazing management plans authorize grazing in wilderness areas the Bureau of Land Management, as necessary, also authorizes limited motor vehicle use. In those cases where the wild and scenic river within a wilderness area authorized for limited motor vehicle use is recommended for a Wild designation, the existing

authorized use would continue. This use would be described in detail in a river management plan if Congress designates the river study area.

5. Land acquisition is not part of, nor is it authorized, in any of the alternatives discussed in the individual river study area documents.

Resource management plans authorize land acquisition actions. Where land acquisition is included in an alternative, it is only included as part of an "ongoing management action," not as a wild and scenic river management action.

Bureau of Land Management, 1994

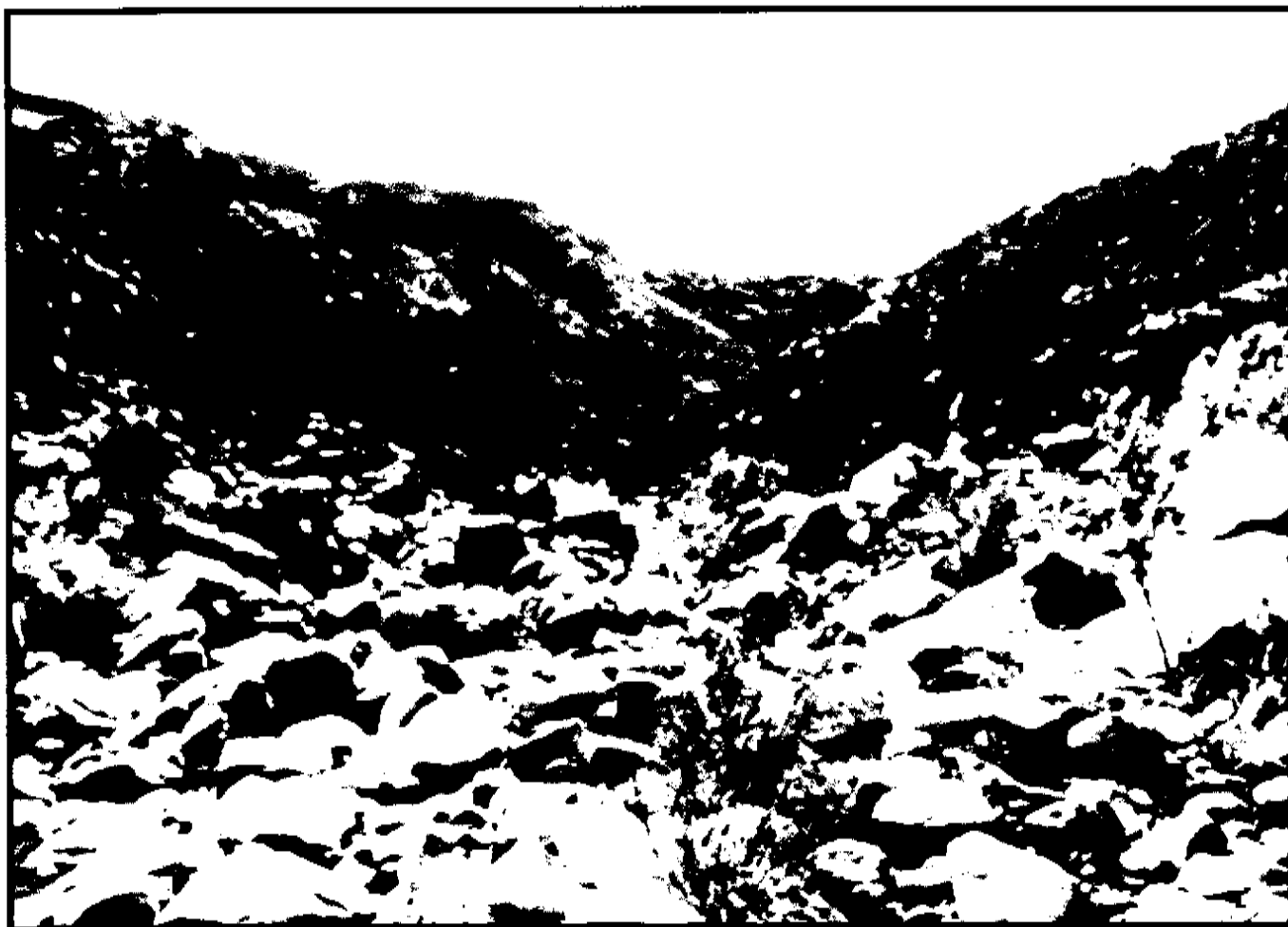
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**AGUA FRIA RIVER
WILD AND SCENIC RIVER STUDY AREA**

**PHOENIX RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



AGUA FRIA WILD AND SCENIC RIVER

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AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Agua Fria River were identified in the Phoenix Resource Management Plan Amendment (1994) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Agua Fria River to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Agua Fria River Wild and Scenic River Study Area is in Yavapai County, Arizona, approximately 20 to 30 miles north of Phoenix. The northern end of the study corridor is two miles east of Cordes Junction, and the southern end is four miles northeast of Black Canyon City. Interstate Highway 17 parallels the Agua Fria River a few miles west of the study area. South of the study area, the river turns westward and intersects the highway at Black Canyon City.

The Agua Fria River study area comprises a corridor of 22.4 miles, including 20.8 miles within public land. It contains 7,160 acres, 93 percent of it public land. The study area is in the Phoenix Resource Area of the Phoenix District. Public land surrounds much of the study area. Small ranches are located on private land within the river corridor.

The study area ranges in elevation from 1,600 to 3,200 feet. The Agua Fria River traverses the

Central Mountains Physiographic Province and enters the Basin and Range Province downstream as it approaches Black Canyon City. Through much of the area, the Agua Fria River Canyon separates Perry Mesa on the east from Black Mesa on the west.

The geography varies from rolling hills of semi-desert grassland at the upper end to Sonoran desertscrub terraces within the river's deeply incised canyon. Livestock grazing is the primary land use. This reach of the Agua Fria River drains the Bradshaw Mountains, Black Hills, and New River Mountains. The Agua Fria River is a major tributary of the lower Gila River.

The Agua Fria River study area consists of two river segments, each with distinct characteristics and values. Segment 1, 7.7 miles long from Sycamore Creek to the juncture of Bloody Basin Road at Horseshoe Ranch, is perennial with some intermittent reaches. Approximately 89 percent of the corridor is under Bureau of Land Management jurisdiction. This northern segment was given a tentative classification as Scenic in the Phoenix Resource Management Plan Amendment (1994).

Segment 2 flows for 14.7 miles from Horseshoe Ranch to Larry Creek as a perennial stream through the Agua Fria River Canyon. All but 0.7 miles of the river passes through public land in this area. Public land accounts for 95 percent of the corridor. This southern segment was tentatively classified as Wild in the Phoenix Resource Management Plan Amendment (1994).

The Agua Fria River was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the amendment to the Phoenix Resource Management Plan and Lower Gila North Management Framework Plan (1994).

The river is free-flowing and has outstandingly remarkable scenic, fish and wildlife habitat, and cultural resource values. The Bureau of Land

Management conducted suitability determinations for each river segment during 1993.

**TABLE AF-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

AGUA FRIA RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	20.8	0.0	1.6	22.4
PERCENT	92.9	0.0	7.1	100.0
TOTAL ACRES	6,710.0	0.0	450.0	7,160.0
PERCENT	93.7	0.0	6.3	100.0

C. INTERRELATIONSHIPS

1. The Bureau of Land Management

The Perry Mesa Area of Critical Environmental Concern, situated largely east of the Agua Fria River, was designated in order to protect important cultural resource values. This area of 9,440 acres contains significant prehistoric archaeological sites, including an archaeological district of 960 acres listed on the National Register of Historic Places. The Perry Mesa Area of Critical Environmental Concern incorporates 2,160 acres or approximately seven miles of the river in segment 2 of the study area.

The Black Canyon Habitat Management Plan,

approved in 1983 and revised in 1993, incorporates the study area. The plan covers approximately 406,000 acres of public land north of Phoenix in Maricopa and Yavapai counties. Undertaken in cooperation with the Arizona Game and Fish Department, it is a package of specific objectives and actions designed to optimize native plant and wildlife species diversity and to improve cover and availability of water for key wildlife species.

2. Department of the Interior Agencies

The U.S. Geological Survey operates and maintains a stream gage located 1.2 miles downstream from the Sycamore Creek confluence.

**TABLE AF-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE AGUA FRIA WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

AGUA FRIA RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Perry Mesa Area of Critical Environmental Concern	2,160	30.2

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

3. Other Federal Agencies

Public land in the Black Canyon topographic corridor, through which the Agua Fria River and Interstate Highway 17 pass, is bordered on the west and north by the Prescott National Forest, and on the east by the Tonto National Forest.

These two National Forests and the Bureau of Land Management are engaged in a cooperative effort to coordinate management of natural and cultural resources in the Agua Fria grasslands ecosystem, which incorporates the Agua Fria River study area. The objective is to evaluate, improve, and protect wildlife habitat, rangeland conditions, and cultural resources in this ecological region.

The Bureau of Land Management and Tonto National Forest have prepared a comprehensive cultural resources overview and expanded National Register of Historic Places district nomination for areas of Perry Mesa and Black Mesa. In 1990, the two agencies cooperatively funded a contracted study assessing the effects of vandalism and potential strategies for reducing its damage to archaeological sites on Perry Mesa (Ahlistrom et. al. 1992).

The International Boundary and Water Commission administers treaty obligations regarding water quality and deliveries to Mexico. These obligations apply to the Gila River watershed, which includes the Agua Fria River.

4. State Agencies

The Arizona Game and Fish Department is cooperating with the Bureau of Land Management in the implementation of the Black Canyon Habitat Management Plan. Such comprehensive plans are provided for in a master memorandum of understanding between the Arizona Game and Fish Commission and the Bureau of Land Management (1987). The Arizona Game and Fish Department also is a partner in coordinating management of natural resources within the Agua Fria grasslands

ecosystem.

The Arizona Department of Transportation operates and maintains a well and pumphouse along the Agua Fria River four miles north of the Larry Creek confluence. This facility provides water for the Sunset Point Rest Area along Interstate Highway 17 on Black Mesa.

5. County

The Agua Fria River study area is in Yavapai County.

6. Private

Several private ranches and patented mining claims are located along the proposed segments. The Horseshoe Ranch, the largest in the study area, is situated at the southern end of segment 1.

The historic Richinbar Mine property, at the edge of Black Mesa west of the Agua Fria River, is the most extensive of the patented mining claims.

D. SCOPING

Scoping meetings specifically highlighting the Agua Fria River study area were held during 1993 in Wickenburg on April 7 and Phoenix March 14. Seventeen to 20 people attended the Wickenburg meeting and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the wild and scenic river study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on construction of new power lines adjacent to the existing Arizona Public Service

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

Navajo-Westwing and Moenkopi-Westwing 500 kV lines

- Impacts on access to Perry Mesa via Bloody Basin Road
- Impacts on use of private property
- Impacts on water rights
- Impacts on federally-listed or candidate fish and wildlife species
- Impacts on riparian vegetation communities
- Impacts on mineral development
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable fish and wildlife habitat
- Impacts on outstandingly remarkable cultural resource values

Issues Considered But Not Addressed

- Impacts on construction of new power lines adjacent to the existing Arizona Public Service Navajo-Westwing and Moenkopi-Westwing 500 Kilovolt lines.

The construction of new power lines would be permitted within existing utility corridors. Environmental analysis would be necessary to assess potential impacts and develop mitigation measures to alleviate adverse effects to outstandingly remarkable resource values.

This issue will not be discussed further.

- Impacts on access to Perry Mesa via Bloody Basin Road.

Subject to private property rights, use of the road and its river crossing would not be restricted.

This issue will not be discussed further.

- Impacts on use of private property.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions

would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- Impacts on water rights.

Designation as a Wild, Scenic, or Recreational river will not have any effect on existing, valid water rights. When a river segment has been designated, the Bureau of Land Management will have the responsibility to preserve that segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility has been or will be determined through assessments of instream flow needs.

The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the Act on designated river segments.

Existing water rights are protected. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further.

- Impact on federally-listed or candidate fish and wildlife species.

The Endangered Species Act requires the Bureau of Land Management, in consultation

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species. Impacts on federally-listed or candidate species will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

- Impact on riparian vegetation communities.

Impacts on riparian vegetation communities will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft **environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Agua Fria River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative
All suitable
No action

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines the entire length of the Agua Fria River to be suitable and recommends designation by Congress into the National Wild and Scenic Rivers System. The segments identified in the eligibility evaluation would be modified in the recommended alternative. The 14.7 mile long eligible segment 2 (Horseshoe Ranch to Larry Canyon) would be subdivided into two smaller segments. These are a new 10.3 mile segment 2 (Horseshoe Ranch to the Arizona Department of Transportation pumphouse) and a 4.4 mile long segment 3 (Pumphouse to Larry Canyon).

In the recommended alternative, segment 2 would be classified as Wild and segment 3 as Scenic due to the presence of a road leading to two pumphouses. Segment 1 (7.7 miles long)

from Sycamore Creek to Horseshoe Ranch would be classified as Scenic. Segments 2 and 3 are primitive and generally inaccessible to the public. The road to the pumphouses enters segment 3 from gated private land at the southern boundary. Segment 1 is accessible at both ends by unpaved road.

Wild and Scenic River Management Actions

Wild and scenic river designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following actions would occur in the segments of the Agua Fria River designated as Wild and Scenic. Where wild and scenic river management actions overlap ongoing management actions, the more stringent action would be applied.

- In segment 2, 3,230 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals.
- Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), which are conducted under the authority of the General Mining Law of 1872, on 6,710 acres.
- Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 6,710 acres.
- The construction of new roads would be prohibited on 3,230 acres designated as Wild in segment 2.
- Roads or trails occasionally crossing the river would be allowed on 3,480 acres designated as Scenic in segments 1 and 3. In accordance with the Wild and Scenic Rivers Act, roads would be inconspicuous and well-screened to

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

maintain the scenic and natural character of these areas.

- Motorized travel would be restricted, except for search and rescue or emergencies, on 3,230 acres designated as Wild in segment 2. On 3,480 acres designated as Scenic, motorized travel could be restricted if necessary to protect outstandingly remarkable values.
- New transmission lines, natural gas lines, and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way. New utility lines within existing rights-of-way would be constructed so as to minimize adverse impacts to the outstandingly remarkable values.
- The construction of new dams, levees, hydropower facilities, or major types of diversions would be prohibited on 20.8 miles along the Agua Fria River.
- Instream flow would be monitored to establish the minimum flow necessary to protect the outstandingly remarkable scenic, and fish and wildlife habitat values.
- Livestock grazing use would be limited to the extent practiced prior to designation.

Ongoing Management Actions

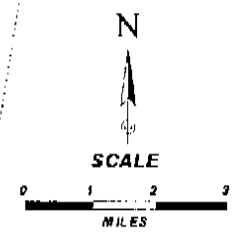
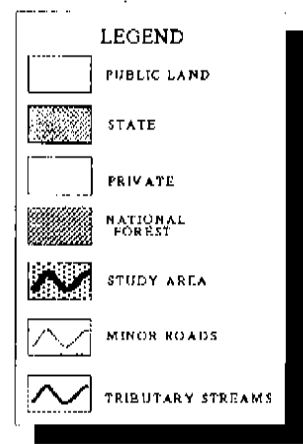
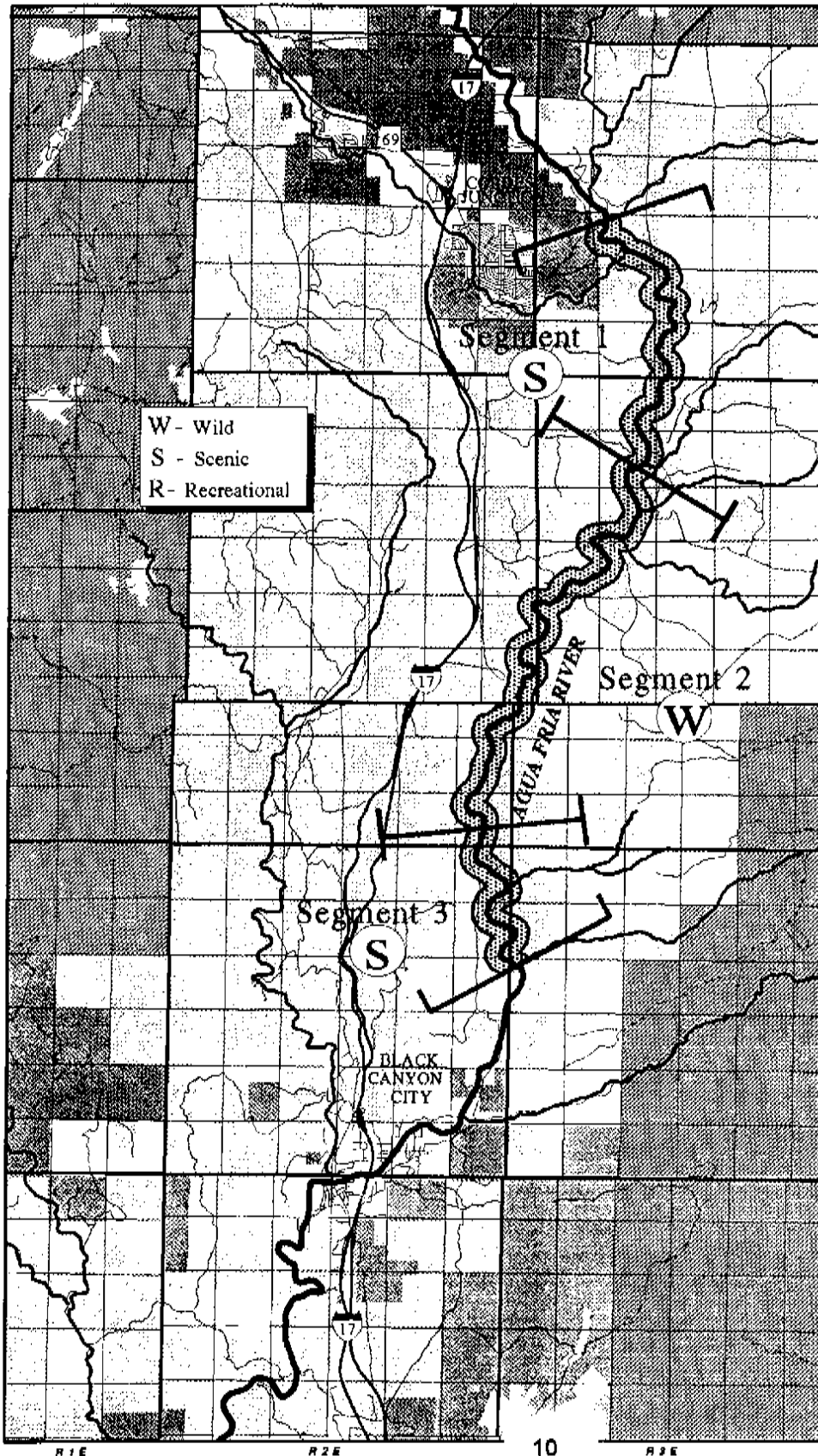
Ongoing management actions in the Agua Fria River area would continue regardless of wild and scenic river designation. The following are selected management actions from the Phoenix Resource Management Plan and the Black Canyon Habitat Management Plan.

- New major utility corridors would be prohibited.
- Efforts would be made to acquire up to 100 acres of private land in segment 2 and up to 20 acres of private land in segment 3 on a willing seller-willing buyer basis.

- Vehicle access to segment 2 via a jeep trail along Badger Spring Wash would be closed.
- Off highway vehicle use would be limited to designated roads and trails on 480 acres in segment 3.
- Off highway vehicle use would be limited to existing roads and trails on 3,000 acres in segments 1 and 3.
- Three native fish species would be reintroduced into tributaries of the Agua Fria River. Desert pupfish (*Cyprinodon macularius*), Gila topminnow (*Poeciliopsis occidentalis occidentalis*), and Gila chub (*Gila intermedia*) would be reintroduced into Silver, Lousy, and Larry creeks. It is likely that these species would repopulate the Agua Fria River.
- Following a feasibility study by the Bureau of Land Management and the Arizona Game and Fish Department, native spikedace fish (*Meda fulgida*) would be reintroduced into the Agua Fria River if feasible.
- Data would be collected regularly at selected sites to determine the status and trend of native fish populations and the presence of exotic fish species.
- Exotic mosquito fish (*Gambusia affinis*) would be eradicated from Perry Mesa Tank and Perry Tank Tinaja, which act as continual sources of infestation in the Agua Fria River.
- Prescribed burning on Black and Perry Mesas would be conducted to restore native grasses and improve pronghorn habitat.
- According to the Black Canyon Habitat Management Plan, cottonwood and willow poles would be planted along the Agua Fria River and its tributaries. Although most of the planting would occur outside the study area, up to 200 acres could be planted within it.

AGUA FRIA RIVER

(Recommended Alternative)



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- The collection of fire wood for home or commercial use would be prohibited on 6,710 acres to preserve dead trees for bird, lizard, and small mammal habitat.
- Grazing allotments would be monitored to identify conflicts with the outstandingly remarkable scenic, and fish and wildlife habitat values.
- Coordinated resource management plans for the grazing allotments along the river would be implemented to resolve any conflicts between livestock grazing and fish and wildlife habitat.
- Grazing would be reduced to eliminate intensive use of the river corridor during the growing season. Seasonal restrictions would allow use only in winter (November through February) and prohibit grazing in riparian areas during the rest of the year.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Agua Fria River and its tributaries.

The following actions would be carried out on up to 2,160 acres in the Perry Mesa Area of Critical Environmental Concern.

- An expanded Perry Mesa National Register of Historic Places District would be established.
- The Bureau of Land Management would continue to inventory and assess the condition of archaeological sites on Perry Mesa.
- Regular aerial surveillance and periodic patrolling would be conducted to reduce the incidence of vandalism to archaeological sites.
- Scientific research by qualified individuals and organizations would be encouraged.
- Selected sites would be evaluated as potential locations for interpretive development for public visitation.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that the entire 7.7 mile length of segment 1 (Sycamore Creek to Horseshoe Ranch) is suitable and recommends it for designation as Scenic. It also recommends that the entire 14.7 miles of segment 2 (Horseshoe Ranch to Larry Canyon) is suitable and recommends it for designation as Wild.

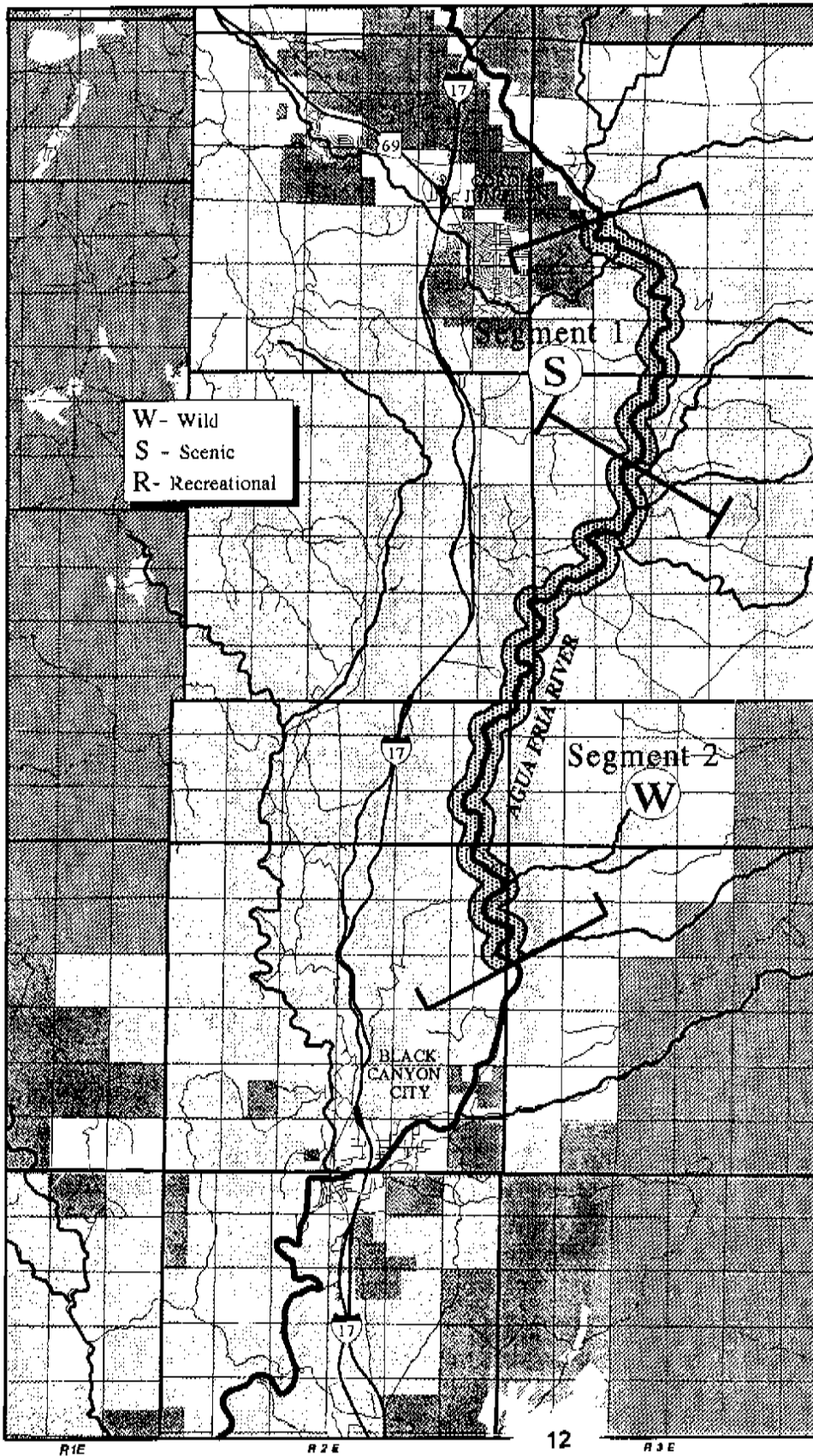
Wild and Scenic River Management Actions

Wild and scenic river designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following actions would occur in the segments of the Agua Fria River designated as Wild and Scenic. Where wild and scenic river management actions overlap ongoing management actions, the more stringent action would be applied.

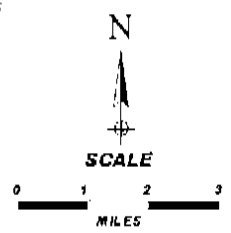
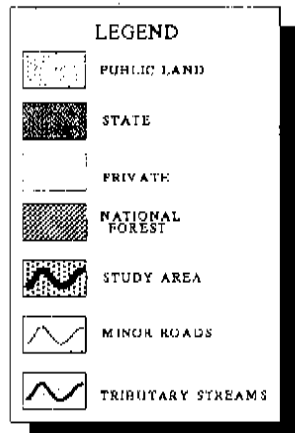
- In segment 2, 5,320 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals.

AGUA FRIA RIVER

(All Suitable Alternative)



W - Wild
S - Scenic
R - Recreational



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- Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), which are conducted under the authority of the General Mining Law of 1872, on 6,710 acres.
- Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 6,710 acres.
- The construction of new roads would be prohibited on 5,320 acres designated as Wild in segment 2.
- Roads or trails occasionally crossing the river would be allowed on 1,390 acres in segment 1. In accordance with the Wild and Scenic Rivers Act, roads would be inconspicuous and well-screened to maintain the scenic and natural character of these areas.
- Motorized travel would be restricted, except for search and rescue or emergencies, on 5,320 acres designated as Wild in segment 2. On 1,390 acres designated as Scenic in segment 1, motorized travel could be restricted if necessary to protect outstandingly remarkable values.
- New transmission lines, natural gas lines, and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way. New utility lines within existing rights-of-way would be constructed so as to minimize adverse impacts to the outstandingly remarkable values.
- The construction of new dams, levees, hydropower facilities, or major types of diversions would be prohibited on 20.8 miles along the Agua Fria River.
- Instream flow would be monitored to establish the minimum flow necessary to protect the outstandingly remarkable scenic, and fish and wildlife habitat values.
- Livestock grazing use would be limited to the

extent practiced prior to designation.

Ongoing Management Actions

Ongoing management actions in the Agua Fria River area would continue regardless of wild and scenic river designation. The following are selected management actions from the Phoenix Resource Management Plan and the Black Canyon Habitat Management Plan.

- New major utility corridors would be prohibited.
- Efforts would be made to acquire up to 120 acres of private land in segment 2 on a willing seller-willing buyer basis.
- Vehicle access to segment 2 via a jeep trail along Badger Spring Wash would be closed.
- Off highway vehicle use would be limited to existing roads and trails on 1,390 acres in segment 1.
- Three native fish species would be reintroduced into tributaries of the Agua Fria River. Desert pupfish (Cyprinodon macularius), Gila topminnow (Poeciliopsis occidentalis occidentalis), and Gila chub (Gila intermedia) would be reintroduced into Silver, Lousy, and Larry creeks. It is likely that these species would repopulate the Agua Fria River.
- Following a feasibility study by the Bureau of Land Management and the Arizona Game and Fish Department, native spikedace fish (Meda fulgida) would be reintroduced into the Agua Fria River if feasible.
- Data would be collected regularly at selected sites to determine the status and trend of native fish populations and the presence of exotic fish species.
- Exotic mosquito fish (Gambusia affinis) would be eradicated from Perry Mesa Tank and Perry Tank Tinaja, which act as continual sources of

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

infestation in the Agua Fria River.

- Prescribed burning on Black and Perry Mesas would be conducted to restore native grasses and improve pronghorn habitat.
- According to the Black Canyon Habitat Management Plan, cottonwood and willow poles would be planted along the Agua Fria River and its tributaries. Although most of the planting would occur outside the study area, up to 200 acres could be planted within it.
- The collection of fire wood for home or commercial use would be prohibited on 6,710 acres to preserve dead trees for bird, lizard, and small mammal habitat.
- Grazing allotments would be monitored to identify conflicts with the outstandingly remarkable scenic, and fish and wildlife habitat values.
- Coordinated resource management plans for the grazing allotments along the river would be implemented to resolve any conflicts between livestock grazing and fish and wildlife habitat.
- Grazing would be reduced to eliminate intensive use of the river corridor during the growing season. Seasonal restrictions would allow use only in winter (November through February) and prohibit grazing in riparian areas during the rest of the year.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Agua Fria River and its tributaries.

The following actions would be carried out on up to 2,160 acres within the Perry Mesa Area of Critical Environmental Concern.

- An expanded Perry Mesa National Register of Historic Places District would be established.
- The Bureau of Land Management would continue to inventory and assess the condition

of archaeological sites on Perry Mesa.

- Regular aerial surveillance and periodic patrolling would be conducted to reduce the incidence of vandalism to archaeological sites.
- Scientific research by qualified individuals and organizations would be encouraged.
- Selected sites would be evaluated as potential locations for interpretive development for public visitation.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.

D. NO ACTION ALTERNATIVE

The no action alternative determines that the Agua Fria Wild and Scenic River Study Area is not suitable and does not recommend it for inclusion in the National Wild and Scenic Rivers System. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Much of the southern segment of the Agua Fria River passes through the Perry Mesa Area of Critical Environmental Concern. Under the no action alternative, this area and the remainder of

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

the Agua Fria River study area would be managed in accordance with objectives established in the Phoenix Resource Management Plan and the recently revised Black Canyon Habitat Management Plan.

Wild and Scenic River Management Actions

There would be no wild and scenic river management actions under implementation of the no action alternative.

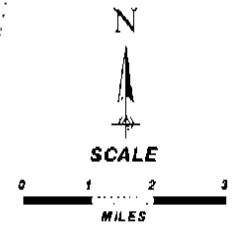
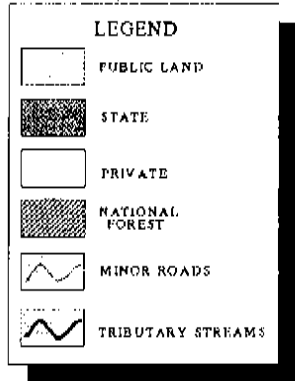
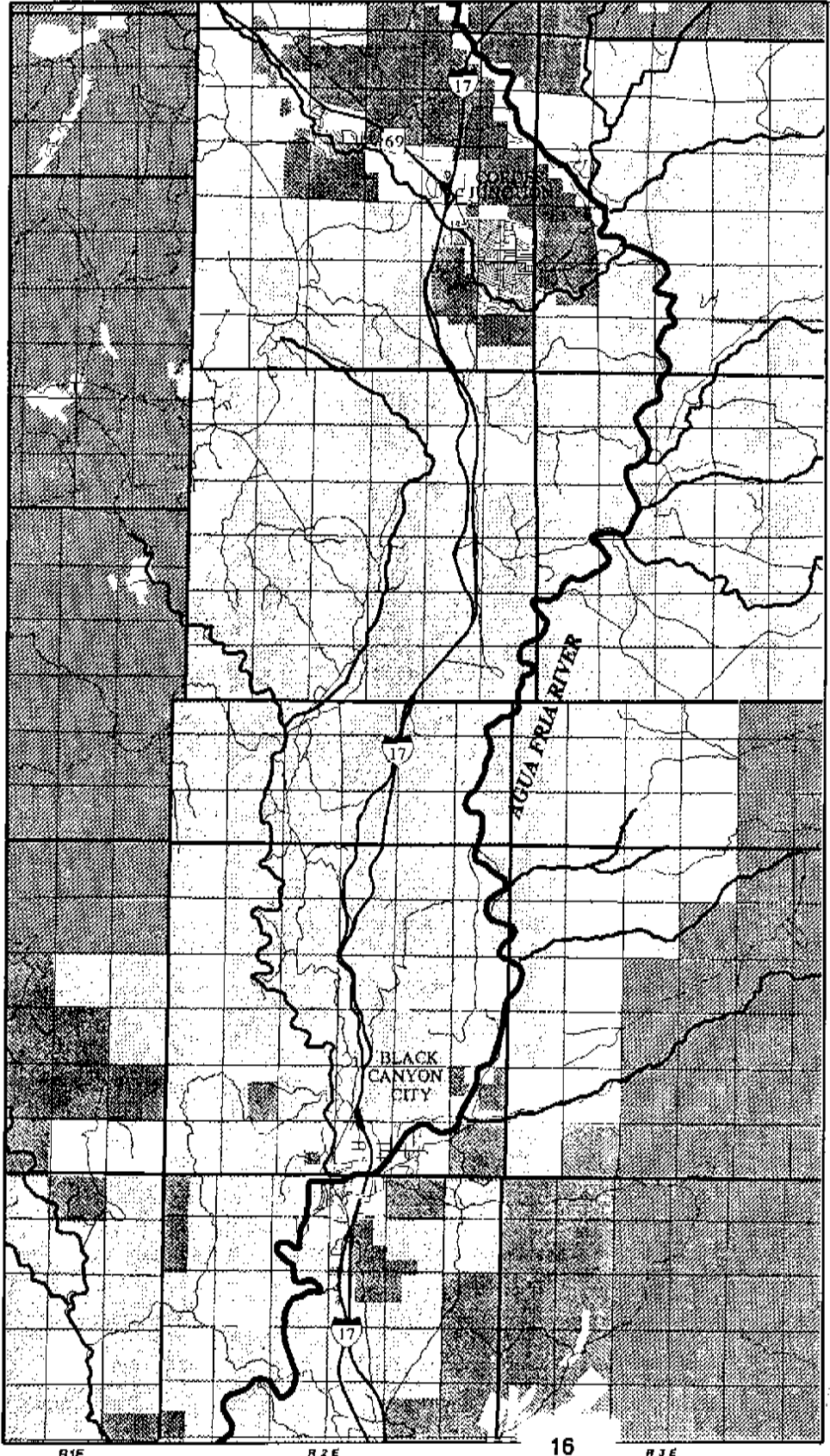
Ongoing Management Actions

Ongoing management actions include the following actions carried out in accordance with the Phoenix Resource Management Plan and the Black Canyon Habitat Management Plan.

- 6,710 acres of public land would remain open to mineral entry.
- Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), which are conducted under the authority of the General Mining Law of 1872, on 2,160 acres in the Perry Mesa Area of Critical Environmental Concern.
- Approved plans of operations would be required for all mining related activities, exceeding the disturbance level of five acres as defined at 43 CFR 3809.1-3, on 4,550 acres.
- New major utility corridors would be prohibited.
- Efforts would be made to acquire up to 120 acres of private land in segment 2 on a willing seller-willing buyer basis.
- Vehicle access to segment 2 via a jeep trail along Badger Spring Wash would be closed.
- Off highway vehicle use would be limited to designated roads and trails on 2,160 acres in the Perry Mesa Area of Critical Environmental Concern.
- Off highway vehicle use would be limited to existing roads and trails on 4,550 acres.
- Three native fish species would be reintroduced into tributaries of the Agua Fria River. Desert pupfish (Cyprinodon macularius), Gila topminnow (Poeciliopsis occidentalis occidentalis), and Gila chub (Gila intermedia) would be reintroduced into Silver, Lousy, and Larry creeks. It is likely that these species would repopulate the Agua Fria River.
- Following a feasibility study by the Bureau of Land Management and the Arizona Game and Fish Department, native spinedace fish (Meda fulgida) would be reintroduced into the Agua Fria River if feasible.
- Data would be collected regularly at selected sites to determine the status and trend of native fish populations and the presence of exotic fish species.
- Exotic mosquito fish (Gambusia affinis) would be eradicated from Perry Mesa Tank and Perry Tank Tinaja, which act as continual sources of infestation in the Agua Fria River.
- Prescribed burning on Black and Perry Mesas would be conducted to restore native grasses and improve pronghorn habitat.
- According to the Black Canyon Habitat Management Plan, cottonwood and willow poles would be planted along the Agua Fria River and its tributaries. Although most of the planting would occur outside the study area, up to 200 acres could be planted within it.
- The collection of fire wood for home or commercial use would be prohibited on 6,710 acres to preserve dead trees for bird, lizard, and small mammal habitat.
- Grazing allotments would be monitored to identify conflicts with the outstandingly remarkable scenic, and fish and wildlife habitat values.

AGUA FRIA RIVER

(No Action Alternative)



UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 PHOENIX DISTRICT
 PHOENIX RESOURCE AREA

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R1E

R2E

16

R3E

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- Coordinated resource management plans for the grazing allotments along the river would be implemented to resolve any conflicts between livestock grazing and fish and wildlife habitat.
- Grazing would be reduced to eliminate intensive use of the river corridor during the growing season. Seasonal restrictions would allow use only in winter (November through February) and prohibit grazing in riparian areas during the rest of the year.
- Instream flow would be monitored to establish the minimum flow necessary to protect fish and wildlife habitat.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Agua Fria River and its tributaries.

The following actions would be carried out on up to 2,160 acres in the Perry Mesa Area of Critical Environmental Concern.

- An expanded Perry Mesa National Register of Historic Places District would be established.
- The Bureau of Land Management would continue to inventory and assess the condition of archaeological sites on Perry Mesa.
- Regular aerial surveillance and periodic patrolling would be conducted to reduce the incidence of vandalism to archaeological sites.
- Scientific research by qualified individuals and organizations would be encouraged.
- Selected sites would be evaluated as potential locations for interpretive development for public visitation.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.

E. ALTERNATIVES CONSIDERED BUT REJECTED

One alternative considered would recommend as nonsuitable any segments having a moderate or high potential for mineral development. This alternative was rejected because segment 2, which has a moderate potential for mineral development, contains the entire range of outstandingly remarkable scenic, fish and wildlife habitat, and cultural resource values in the Agua Fria River study area.

Another alternative considered was developed by the Arizona Rivers Coalition (1991). This alternative was rejected because it is identical to the all suitable alternative in all but one respect. The Arizona Rivers Coalition alternative proposes that segment 1 be designated as Recreational, while it would be designated instead as scenic under both the all suitable alternative and the recommended alternative.

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

**TABLE AF-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative	All suitable alternative	No action
Outstandingly Remarkable Scenic Values	No adverse impact; Beneficial impact from long-term legislative protection	No adverse impact; Beneficial impact from long-term legislative protection	Potential adverse impact from small mine development on new mining claims; No long-term legislative protection
Outstandingly Remarkable Fish and Wildlife Habitat	No adverse impact; Beneficial impact from long-term legislative protection	No adverse impact; Beneficial impact from long-term legislative protection	Potential adverse impact from small mine development on new mining claims; No long-term legislative protection
Outstandingly Remarkable Cultural Resource Values	No adverse impact; Beneficial impact from long-term legislative protection	No adverse impact; Beneficial impact from long-term legislative protection	Potential adverse impact from small mine development on new mining claims; No long-term legislative protection
Mineral Development	Adverse impact from withdrawal of 3,230 acres in new segment 2 from mineral entry, leasing, and materials disposals	Adverse impact from withdrawal of 5,320 acres in segment 2 from mineral entry, leasing, and materials disposals	No adverse impact

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Agua Fria River study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Phoenix Resource Management Plan Amendment (1994), and the Agua Fria River Wild and Scenic suitability determination assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Agua Fria River is distinguished by outstandingly remarkable scenic, fish and wildlife habitat, and cultural resource values.

The outstandingly remarkable scenic values reflect the area's topographic diversity and its history of volcanic activity. An extinct volcano known as Joe's Hill is the dominant feature on the mesa tops, covered by basalt from ancient lava flows. The mesas offer a spectacular vista of grasslands and canyons, views of pronghorn herds and other wildlife, and echoes of water flowing in the river and its tributary creeks.

In the upper segment of the Agua Fria River study area, rolling hills and sheer cliffs of the mesa edges border a lush riparian valley. In the lower segment, the dramatic Agua Fria River Canyon, filled with boulders that capture pools and produce waterfalls during high flows, is joined by many deeply incised tributary canyons.

The outstandingly remarkable fish and wildlife habitat values are representative of the rare riparian oases that support thriving populations of wildlife in the desert. The Agua Fria River provides habitat for numerous native fish and wildlife species, including six federally listed or candidate species of fish, reptiles, amphibians, and birds. The grasslands on the adjacent mesas provide habitat for pronghorn and abundant other wildlife.

The outstandingly remarkable cultural resource values reflect the existence of one of the largest and most important complexes of late prehistoric archaeological sites in central Arizona. Despite a history of vandalism, these cultural resources retain significant scientific values and may have cultural importance for Native American tribes.

B. MINERALS

Thick sequences of Tertiary volcanics and younger alluvium cover basement rocks of Yavapai schist that may contain usable mineral deposits. This portion of the Agua Fria River flows through a part of the small Burmister manganese district and through one of the four parts of the Richinbar gold district. Numerous mining claims exist throughout the river basin. Eleven claims are located in segment 1 and 29 claims in segment 2.

Primarily small-scale mining operations have produced gold, silver, and manganese. Currently, mining activity consists of small-scale exploration and recreational gold panning in the river's placer gravels. There are no major mining operations producing minerals in commercial quantities.

More intensive mining activity occurred in the past. The entire Richinbar mineral district produced 32,000 tons of gold, silver, copper, and lead from 1905 to 1971. The Richinbar Mine, located at the rim of Black Mesa overlooking the Agua Fria River Canyon, produced and processed gold extracted from at least two deep shafts during its peak production period from 1905 to 1908.

C. LANDS

Cattle ranches encompass approximately 450 acres of private land in four parcels in the study area. No other private or commercial development currently exists in the area.

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

No state or federal highways access the Agua Fria River. The Bloody Basin Road, a bladed county road, fords the river at the edge of the Horseshoe Ranch private property, the boundary between segments 1 and 2.

In segment 1, a private dirt road fords the river at the Horseshoe Ranch Headquarters. There is also a ford on private land at the Box Bar Ranch. At the north end of the study area, a county road parallels the river for 0.4 miles.

A two-track road enters the study area at its southern boundary and parallels the canyon edge. Another road enters the southern segment from gated private land. This 3.8 mile road crosses the river five times, is joined by the two-track road, and ends at two well pumphouses. The well supplies water to an interstate highway rest area and a stock pond on Black Mesa.

The Arizona Public Service Company operates the parallel Navajo-Westwing and Moenkopi-Westwing 500 kilovolt power lines, which intersect the southern segment of the river at two locations. In addition, an electric line on wooden poles supplies power to the Arizona Department of Transportation pumphouse. From the pumphouse, the line goes directly up and out of the canyon.

D. RECREATION

The area currently is used by local citizens and Phoenix residents for sightseeing, picnicking, hiking, camping, off-road vehicle travel, hunting, horseback riding, and recreational gold panning. Kayaking occurs during high water flows. These activities account for an estimated annual 1,200 to 1,500 visitor-use days.

No developed recreational facilities exist in the river corridor.

E. WILDLIFE

Mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus couesi*), pronghorn

(*Antilocapra americana*), javelina (*Tayassu tajacu*), mountain lion (*Felis concolor*), coyotes (*Canis latrans*), red-tailed hawks (*Buteo jamaicensis*), western diamondback rattlesnakes (*Crotalus atrox*), and desert cottontails (*Sylvilagus auduboni*) range through the area. The grasslands on the mesas adjacent to the Agua Fria River support pronghorn and abundant other wildlife.

The river provides habitat for native amphibian and fish species including canyon tree frogs (*Hyla arenicolor*), Gila mountain suckers (*Pantosteus clarki*), and longfin dace (*Agosia chrysogaster*). Exotic amphibian and fish species include bullfrogs (*Rana catesbeiana*), fathead minnows (*Pimephales promelas*), green sunfish (*Lepomis cyanellus*), and mosquitofish (*Gambusia affinis*).

Six federally listed or candidate species have been observed in the study area. Bald eagles (*Haliaeetus leucocephalus*), a federally listed endangered species, occasionally are seen along the Agua Fria River during migration. Bald eagle nesting activity has occurred south of the study area around Lake Pleasant. Peregrine falcons (*Falco peregrinus anatum*), also a listed endangered species, have been observed in the vicinity of the Agua Fria River Canyon. Its cliffs provide potential nesting areas, although nesting activity has not been documented.

Spikedace (*Meda fulgida*), federally listed as a threatened fish species, historically inhabited the Agua Fria River but are no longer present.

No other federally listed threatened or endangered species have been observed along the Agua Fria River. Lowland leopard frogs (*Rana yavapaiensis*) and Mexican garter snakes (*Thamnophis eques*), both candidate category 2 species, inhabit the river and its tributaries. Desert tortoise (*Gopherus agassizii*), also a category 2 species, exist on the desert scrub benches near the river's confluence with Lousy Canyon.

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

Gila chub (*Gila intermedia*), a native fish species also assigned to category 2, are present in Silver Creek above its confluence with the Agua Fria River.

According to the U.S. Fish and Wildlife Service, other candidate species also may be present along the Agua Fria River in Yavapai County. These include cactus ferruginous pygmy owls (*Glaucidium brasilianum cactorum*), a category 1 species. Potential category 2 wildlife species are spotted bats (*Euderma maculatum*), California leaf-nosed bats (*Macrotus californicus*), Yavapai Arizona pocket mice (*Perognathus amplus amplus*), loggerhead shrikes (*Lanius ludovicianus*), ferruginous hawks (*Buteo regalis*), chuckwalla lizards (*Sauromalus obesus*), Arizona toads (*Bufo microscaphus microscaphus*), and desert suckers (*Catostomus clarki*).

Common black hawks (*Buteogallus anthracinus*), a state special status species, range along the Agua Fria River and are known to nest at Silver Creek and Lousy Canyon.

F. VEGETATION

The uplands adjacent to the Agua Fria River at the upper end are semi-desert grasslands dominated by tobosa grass (*Hilaria mutica*), with some patches of mixed chaparral. The uplands along the river at the lower end are Sonoran desertscrub dominated by an association of palo verde trees (*Cercidium microphyllum*) and saguaro cacti (*Carnegiea gigantea*).

The riparian corridor at the upper end has a dominant overstory of sycamore (*Plantanus wrightii*), cottonwood (*Populus fremontii*), ash (*Fraxinus velutina*), and willow (*Salix goodingii*). Other plant species present include black walnut (*Juglans major*), canyon grape (*Vitis arizonica*), netleaf hackberry (*Celtis reticulata*), seepwillow (*Baccharis salicifolia*), bulrush (*Scirpus* sp.), and cattail (*Typha* sp.).

At the lower end, the dominant overstory

consists of willow and ash, with sycamore and walnut absent.

No special status plants are known to exist in the Agua Fria River study area. However, it is possible that Hohokam agave (*Agave murpheyi*), a category 2 species, may be associated with archaeological sites in this area.

Portions of the riparian zone have been degraded due to past livestock grazing practices, mineral exploration, and off-highway vehicle use. A riparian area condition evaluation inventory examined a 31 mile segment of the river and determined that 22.3 miles (72 percent) is in satisfactory condition and 8.7 miles in unsatisfactory condition (Black Canyon Habitat Management Plan 1993).

G. CULTURAL RESOURCES

The Perry Mesa region contains one of the largest complexes of late prehistoric sites in central Arizona. Archaeological evidence of the prehistoric Hohokam and Sinagua/Salado cultures exists throughout the Agua Fria River study area and its bordering mesas and mountains. The several hundred recorded archaeological sites include large and small stone pueblos, impressive rock art (petroglyph) sites, agricultural field areas, and artifact scatters without structures. It is likely that many additional sites exist but have yet to be discovered.

Although most of the sites are situated on the mesa tops and in the upper canyons of Perry Mesa and Black Mesa, some are located in the canyon bottoms. At least 40 archaeological sites have been recorded in the boundaries of the Agua Fria River study area.

The Perry Mesa Area of Critical Environmental Concern was established to protect these cultural resources, which have sustained damage from illegal excavation and artifact collecting.

The Richinbar Mine, located on private patented

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land at the edge of Black Mesa, is a significant historic site.

H. WATER RESOURCES

The Agua Fria River watershed is a sub-basin of the ongoing Gila River System and Source General Water Rights Stream Adjudication. At present, the Bureau of Land Management has not filed an instream flow application with the State of Arizona. However, an instream flow assessment will be conducted to determine the amount of water necessary to protect fisheries, wildlife, and recreational values. This information will support an instream flow application to be submitted to the state.

Monitoring sites have been established along the river in order to evaluate water quality and provide baseline data for an instream flow assessment.

The Arizona Department of Environmental Quality has not evaluated water quality along this reach of the Agua Fria River. Upstream of the study area, the river's upper reaches and headwaters do not meet state water quality standards due to heavy metals contamination from mine sources on private land (Arizona Department of Environmental Quality 1992:77-83). Drainage from abandoned mines on private land could degrade water quality downstream in the Agua Fria River study area.

The yearly average flow of the Agua Fria River is 36.5 cubic feet per second (U.S. Geological Survey Water Data Report AZ-91-1, 1992). However, this statistic masks the extreme variability in flows that can occur from year to year and season to season in a desert stream. The U.S. Geological Survey stream gage south of the Sycamore Creek confluence has recorded stream flows as low as 0.10 cubic feet per second during the relatively dry months of August and September. In contrast, the mean flow in March is 389 cubic feet per second.

At times, high intensity rainfall events have turned the Agua Fria River into a raging torrent. Its flow exceeded 33,000 cubic feet per second during the great flood of February 1980, which destroyed the Interstate Highway 17 bridge at Black Canyon City.

There is one developed water well shared by the Arizona Department of Transportation and the grazing permittee, located about four miles north of the southern boundary of the study area. Two pumphouse facilities transfer water from the well to a highway rest area and a stock pond.

I. LIVESTOCK GRAZING

The study area lies within the Box Bar, Horseshoe, Cross Y, Cordes 1, and Cordes 2 grazing allotments. These allotments total 11,194 acres, 95 percent of which are administered by the Bureau of Land Management.

There are 1,903 animal unit months (AUMs) authorized on the public land portion of these allotments. An AUM is the amount of forage necessary for the sustenance of one cow for one month. Five sheep are equal to one cow with calf in animal unit month calculations. The Cordes 1 Allotment is part of an historic sheep driveway with an authorization of 2,470 sheep for 45 days.

In regard to the Bureau's criteria for the classification of grazing allotments, all of these allotments have been assigned to the "Improve" (I) category. This category signifies that present range condition is unsatisfactory or that serious resource-use conflicts exist. The management objective for I allotments is to improve current resource conditions.

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Agua Fria River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderately sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderately sized mine. Large mining operations would be those involving more than five acres and subject to approval of a Bureau of Land Management approved plan of operations.

Designation as a wild and scenic river would not affect valid existing rights and access to mining claims.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The Agua Fria River study area contains outstandingly remarkable scenic, fish and wildlife habitat, and cultural resource values.

Segment 1 has a low potential and segment 2 a moderate potential for mineral development. The river study area crosses two historic mining districts for gold and manganese. Forty mining claims have been filed in the river basin.

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Under the recommended alternative, 20.8 riparian miles incorporating 6,710 acres of public land in the Agua Fria River study area would be recommended suitable for designation. The outstandingly remarkable values would receive special legislative protection. Segment 1 would be suitable and recommended for designation as Scenic. Segment 2 would be subdivided into two smaller segments, a 10.3 mile segment 2 deemed suitable and recommended for designation as Wild and a 4.4 mile segment 3 determined suitable and recommended for designation as Scenic.

Impacts on Outstandingly Remarkable Scenic Values.

The outstandingly remarkable scenic values reflect the area's topographic diversity and its history of volcanic activity. An extinct volcano known as Joe's Hill is the dominant feature on the mesa tops, covered by basalt from ancient lava flows. The mesas offer a spectacular vista of grasslands and canyons, views of pronghorn herds and other wildlife, and echoes of water flowing in the river and its tributary creeks.

The lower segment features the Agua Fria River Canyon with pools and waterfalls during high flows.

Under the recommended alternative, management actions associated with wild and scenic river management would occur. In segment 2, 3,230 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals. These actions would prevent damage to outstandingly remarkable scenic values from surface disturbance, the presence of machinery, or noise associated with mineral activities. Mining patents could only apply to the mineral estate on 6,710 acres. This would ensure continued federal protection of the surface estate. Long-term protection of the outstandingly remarkable scenic values would result from this action.

Plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development.

Constructing new roads would be prohibited on 3,230 acres designated as Wild in segment 2. Motorized travel would be restricted, except for search and rescue or emergencies, on those 3,230 acres. These actions would protect the outstandingly remarkable scenic values by preserving the area's pristine quality.

Prohibiting the construction of new dams, levees, hydropower facilities, or major types of diversions on 20.8 riparian miles along the Agua Fria River would retain the waterway in the condition it was when the outstandingly remarkable scenic values were identified.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, limiting travel to designated and existing roads and trails in segments 1 and 3 would protect outstandingly remarkable scenic values by preventing erosion and preserving the natural character of roadless areas.

This action, however, may result in management constraints to other resource values such as livestock grazing and recreation.

• Conclusion

Implementation of the recommended alternative would have no adverse impact on the outstandingly remarkable scenic values. A beneficial impact would result from long-term legislative protection of these values.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The area supports a variety of fish and wildlife species, discussed in Chapter III. Six federally

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listed or candidate species have been observed in the study area, including bald eagles and peregrine falcons, both federally listed endangered species.

Lowland leopard frogs, Mexican garter snakes, and desert tortoise, all category 2 species, inhabit portions of the area. Gila chubs, a native fish species also assigned to category 2, are present in Silver Creek above its confluence with the Agua Fria River.

According to the U.S. Fish and Wildlife Service, any of nine additional listed or candidate species may be present along the Agua Fria River in Yavapai County.

Common black hawks, a state special status species, range along the Agua Fria River and are known to nest in Silver Creek and Lousy Canyon.

No special status plants are known to exist within the Agua Fria River study area. Although not yet observed, it is possible that Hohokam agave, a category 2 species, may be associated with archaeological sites on the mesas.

Under the recommended alternative, management actions associated with Wild and Scenic River management would occur. In segment 2, 3,230 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals. These actions would prevent damage to outstandingly remarkable fish and wildlife habitat from surface disturbance, noise, or other conflicts associated with mineral activities. Mining patents could only apply to the mineral estate on 6,710 acres. This would ensure continued federal protection of the surface estate. Long-term protection of the outstandingly remarkable values would result from this action.

Plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres. Approved plans of operations would ensure that

outstandingly remarkable values would not be degraded by mineral development.

Constructing new roads would be prohibited on 3,230 acres designated as Wild in segment 2. Motorized travel would be restricted, except for search and rescue or emergencies, on those 3,230 acres. These actions would protect the outstandingly remarkable fish and wildlife habitat values by reducing surface disturbance and disruption caused by human traffic.

Prohibiting the construction of new dams, levees, hydropower facilities, or major types of diversions on 20.8 riparian miles along the Agua Fria River would retain the waterway in the condition it was when the outstandingly remarkable fish and wildlife habitat values were identified.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, limiting travel to designated and existing roads and trails in segments 1 and 3 would protect outstandingly remarkable fish and wildlife habitat values by preventing erosion and preserving the natural character of roadless areas.

This action, however, may result in management constraints to other resource values such as livestock grazing and recreation.

• Conclusion

Implementation of the recommended alternative would have no adverse impact on the outstandingly remarkable fish and wildlife habitat values. A beneficial impact would result from long-term legislative protection of these values.

Impacts on Outstandingly Remarkable Cultural Resource Values.

The Perry Mesa region contains one of the largest complexes of late prehistoric sites in central Arizona. The several hundred archaeological sites include large and small

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stone pueblos, impressive petroglyph sites, agricultural field areas, and artifact scatters without structures.

Although most of the sites are situated on the mesa tops and in the upper canyons of Perry Mesa and Black Mesa, some are located in the canyon bottoms. At least 40 archaeological sites have been recorded within the boundaries of the study area.

The most serious threat to these sites is physical damage and loss of scientific data from illegal excavation and artifact collecting. A study of site vandalism on Perry Mesa, funded by the Bureau of Land Management and Tonto National Forest, indicated that although it remains a problem, the incidence of vandalism has declined within the past two decades (Ahlstrom et.al. 1992).

Under the recommended alternative, certain management actions associated with wild and scenic river management would protect outstandingly remarkable cultural resource values. For example, prohibiting mineral entry, mineral leasing, materials disposals, new roads and motorized travel on 3,230 acres in segment 2 would protect cultural resources by preserving the area's pristine character and limiting human traffic and access to fragile ruins.

Plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development.

Additional protection for the outstandingly remarkable cultural resource values would be provided by the ongoing management activities described in Chapter II.

The Perry Mesa Area of Critical Environmental Concern currently is patrolled by Bureau of Land Management rangers, and in conjunction with cooperative agreements, by the Arizona Site Stewards and the Civil Air Patrol.

Continued surveillance would protect outstandingly remarkable cultural resource values by reducing the incidence of vandalism.

An expanded Perry Mesa National Register of Historic Places District would be established, and the Bureau of Land Management would continue to work with the Tonto National Forest to inventory and evaluate archaeological sites in the canyons and on Perry and Black mesas.

Inventory and evaluation would protect cultural resource values by providing information critical to the development of site-specific protection and stabilization strategies.

• Conclusion

Implementation of the recommended alternative would have no adverse impact on the outstandingly remarkable cultural resource values. A beneficial impact would result from long-term legislative protection of these values.

Impacts on Mineral Development

This portion of the Agua Fria River flows through a part of the Burmister manganese district and through one of the four parts of the Richinbar gold district. Numerous mining claims exist throughout the river basin. Eleven claims are located in segment 1 and 29 claims in new segment 2 and segment 3.

Primarily small-scale mining operations have produced gold, silver, and manganese. Currently, mining activity consists of small-scale exploration and recreational gold panning in the river's placer gravels. There are no major mining operations producing minerals in commercial quantities.

According to the mineral development scenarios used in this document, a projected six small mining operations smaller than five acres and employing fewer than five people would be developed within the next 20 years. No larger operations are anticipated.

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Approximately 3,230 acres in segment 2 would be withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals.

Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres.

Mining patents would be restricted to the mineral estate on 6,710 acres of public land.

Exploration and new mining claims would be allowed in segments 1 and 3. Reasonable access to mining claims and mineral leases in segments 1 and 3 and to existing claims in segment 2 would be permitted.

• Conclusion

Implementation of the recommended alternative would have an adverse impact on mineral development resulting from the withdrawal of 3,230 acres from mineral entry and closure to mineral leasing and material disposals in segment 2, an area of moderate mineral potential. The requirement for approved mining plans of operations, for all activities above casual use, could increase some of the costs associated with mineral development.

Cumulative impacts of implementing the recommended alternative.

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined in a corridor approximately five miles on either side and both ends of the Agua Fria River study area.

Over most of the area, the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Perry Mesa Area of Critical Environmental Concern and the Phoenix Resource Management Plan.

Lands to the east of the Agua Fria River are largely within the Tonto National Forest, and the Prescott National Forest borders the study area to the north and northeast. The Bureau of Land Management and the two National Forests are cooperating in development of future management directions for protecting the Agua Fria grasslands ecosystem, an area incorporating the zone considered in regard to cumulative impacts.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative, resource management activities would be subject to the Perry Mesa Area of Critical Environmental Concern and the Wild and Scenic Rivers Act. There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the Perry Mesa Area of Critical Environmental Concern and the Wild and Scenic Rivers Act.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, a projected six small mining operations on up to six new

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claims would be precluded. Most other short-term uses would continue and future development options not restricted by the Wild and Scenic Rivers Act or by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The Agua Fria River study area contains outstandingly remarkable scenic, fish and wildlife habitat, and cultural resource values.

Segment 1 has a low potential and segment 2 a moderate potential for mineral development. The river study area crosses two historic mining districts for gold and manganese. Forty mining claims have been filed in the river basin.

Under the all suitable alternative, the Agua Fria River Wild and Scenic River study segment 1 would be determined suitable and recommended for designation as Scenic; segment 2 would be determined suitable and recommended for designation as Wild.

Impacts on Outstandingly Remarkable Scenic Values

The outstandingly remarkable scenic values reflect the area's topographic diversity and its history of volcanic activity. An extinct volcano known as Joe's Hill is the dominant feature on the mesa tops, covered by basalt from ancient lava flows. The mesas offer a spectacular vista of grasslands and canyons, views of pronghorn herds and other wildlife, and echoes of water flowing in the river and its tributary creeks.

The lower segment features the Agua Fria River Canyon with pools and waterfalls during high flows.

Under the all suitable alternative, management actions associated with wild and scenic river management would occur. In segment 2, 5,320 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals. These actions

would prevent damage to outstandingly remarkable scenic values from surface disturbance, the presence of machinery, or noise associated with mineral activities. Mining patents could only apply to the mineral estate on 6,710 acres. This would ensure continued federal protection of the surface estate. Long-term protection of the outstandingly remarkable scenic values would result from this action.

Plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development.

Constructing new roads would be prohibited on 5,320 acres designated as Wild in segment 2. Motorized travel would be restricted, except for search and rescue or emergencies, on those 5,320 acres. These actions would protect the outstandingly remarkable scenic values by preserving the area's pristine quality.

Prohibiting the construction of new dams, levees, hydropower facilities, or major types of diversions on 20.8 riparian miles along the Agua Fria River would retain the waterway in the condition it was when the outstandingly remarkable scenic values were identified.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, limiting travel to existing roads and trails in segment 1 would protect outstandingly remarkable scenic values by preventing erosion and preserving the natural character of roadless areas.

This action, however, may result in management constraints to other resource values such as livestock grazing and recreation.

• Conclusion

Implementation of the all suitable alternative would have no adverse impact on the

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outstandingly remarkable scenic values. A beneficial impact would result from long-term legislative protection of these values.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The area supports a variety of fish and wildlife species, discussed in Chapter III. Six federally listed or candidate species have been observed in the study area, including bald eagles and peregrine falcons, both federally listed endangered species.

Lowland leopard frogs, Mexican garter snakes, and desert tortoise, all category 2 species, inhabit portions of the area. Gila chubs, a native fish species also assigned to category 2, are present in Silver Creek above its confluence with the Agua Fria River.

According to the U.S. Fish and Wildlife Service, any of nine additional listed or candidate species may be present along the Agua Fria River in Yavapai County.

Common black hawks, a state special status species, range along the Agua Fria River and are known to nest at Silver Creek and Lousy Canyon.

No special status plants are known to exist in the Agua Fria River study area. Although not yet observed, it is possible that Hohokam agave, a category 2 species, may be associated with archaeological sites on the mesas.

Under the all suitable alternative, management actions associated with wild and scenic river management would occur. In segment 2, 5,320 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals. These actions would prevent damage to outstandingly remarkable fish and wildlife habitat from surface disturbance, noise, or other conflicts associated with mineral activities. Mining patents could only apply to the mineral estate on 6,710 acres. This would ensure continued federal protection

of the surface estate. Long-term protection of the outstandingly remarkable values would result from this action.

Plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development.

Constructing new roads would be prohibited on 5,320 acres designated as Wild in segment 2. Motorized travel would be restricted, except for search and rescue or emergencies, on those 5,320 acres. These actions would protect the outstandingly remarkable fish and wildlife habitat values by reducing surface disturbance and disruption caused by human traffic.

Prohibiting the construction of new dams, levees, hydropower facilities, or major types of diversions on 20.8 riparian miles along the Agua Fria River would retain the waterway in the condition it was when the outstandingly remarkable fish and wildlife habitat values were identified.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, limiting travel to existing roads and trails in segment 1 would protect outstandingly remarkable fish and wildlife habitat values by preventing erosion and preserving the natural character of roadless areas.

This action, however, may result in management constraints to other resource values such as livestock grazing and recreation.

• Conclusion

Implementation of the all suitable alternative would have no adverse impact on the outstandingly remarkable fish and wildlife habitat values. A beneficial impact would result from long-term legislative protection of these values.

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Impacts on Outstandingly Remarkable Cultural Resource Values.

The Perry Mesa region contains one of the largest complexes of late prehistoric sites in central Arizona. The several hundred archaeological sites include large and small stone pueblos, impressive petroglyph sites, agricultural field areas, and artifact scatters without structures.

Although most of the sites are situated on the mesa tops and in the upper canyons of Perry Mesa and Black Mesa, some are located in the canyon bottoms. At least 40 archaeological sites have been recorded within the boundaries of the study area.

The most serious threat to these sites is physical damage and loss of scientific data from illegal excavation and artifact collecting. A study of site vandalism on Perry Mesa, funded by the Bureau of Land Management and Tonto National Forest, indicated that although it remains a problem, the incidence of vandalism has declined within the past two decades (Ahlgren et. al. 1992).

Under the all suitable alternative, certain management actions associated with wild and scenic river management would protect outstandingly remarkable cultural resource values. For example, prohibiting mineral entry, mineral leasing, materials disposals, new roads and motorized travel on 5,320 acres in segment 2 would protect cultural resources by preserving the area's pristine character and limiting human traffic and access to fragile ruins.

Plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development.

Additional protection for the outstandingly remarkable cultural resource values would be

provided by the ongoing management activities described in Chapter II.

The Perry Mesa Area of Critical Environmental Concern currently is patrolled by Bureau of Land Management rangers, and in conjunction with cooperative agreements, by the Arizona Site Stewards and the Civil Air Patrol.

Continued surveillance would protect outstandingly remarkable cultural resource values by reducing the incidence of vandalism.

An expanded Perry Mesa National Register of Historic Places District would be established, and the Bureau of Land Management would continue to work with the Tonto National Forest to inventory and evaluate archaeological sites in the canyons and on Perry and Black mesas.

Inventory and evaluation would protect cultural resource values by providing information critical to the development of site-specific protection and stabilization strategies.

• Conclusion

Implementation of the all suitable alternative would have no adverse impact on the outstandingly remarkable cultural resource values. A beneficial impact would result from long-term legislative protection of these values.

Impacts on Mineral Development

This portion of the Agua Fria River flows through a part of the Burmister manganese district and through one of the four parts of the Richinbar gold district. Numerous mining claims exist throughout the river basin. Eleven claims are located in segment 1 and 29 claims in new segment 2 and segment 3.

Primarily small-scale mining operations have produced gold, silver, and manganese. Currently, mining activity consists of small-scale exploration and recreational gold panning in the river's placer gravels. There are no major mining operations producing minerals in

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commercial quantities.

According to the mineral development scenarios used in this document, a projected six small mining operations smaller than five acres and employing fewer than five people would be developed within the next 20 years. No larger operations are anticipated.

Approximately 5,320 acres in segment 2 would be withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals.

Mining patents would be restricted to the mineral estate on 6,710 acres of public land.

Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), on 6,710 acres.

Exploration and new mining claims would be allowed in segment 1. Reasonable access to mining claims and mineral leases in segment 1 and to existing claims in segment 2 would be permitted.

• Conclusion

Implementation of the all suitable alternative would have an adverse impact on mineral development resulting from the withdrawal of 5,320 acres from mineral entry and closure to mineral leasing and material disposals in segment 2, an area of moderate mineral potential. The requirement for approved mining plans of operations, for all activities above casual use, could increase some of the costs associated with mineral development.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

The no action alternative determines that the entire Agua Fria River study area is not suitable and does not recommend it for inclusion in the National Wild and Scenic Rivers System. No wild and scenic river management actions

would occur. The outstandingly remarkable values identified in the eligibility evaluation would not receive long-term legislative protection under the Wild and Scenic Rivers Act.

The outstandingly remarkable scenic, fish and wildlife habitat, and cultural resource values would be subject to the effects of actions allowable under the Phoenix Resource Management Plan and management of 2,160 acres in the Perry Mesa Area of Critical Environmental Concern.

Impacts on Outstandingly Remarkable Scenic Values

The outstandingly remarkable scenic values reflect the area's topographic diversity and its historic of volcanic activity. An extinct volcano known as Joe's Hill is the dominant feature on the mesa tops, covered by basalt from ancient lava flows. The mesas offer a spectacular vista of grasslands and canyons, views of pronghorn herds and other wildlife, and echoes of water flowing in the river and its tributary creeks.

The lower segment features the Agua Fria River Canyon with pools and waterfalls during high flows.

Under the no action alternative, the entire area would remain open to mineral entry. According to the mineral development scenarios used in this document, a projected six small mining operations smaller than five acres and employing fewer than five people would be developed within the next 20 years.

On 2,160 acres in the Perry Mesa Area of Critical Environmental Concern, approved mining plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b). On the remaining 4,550 acres of the study area, the development of small mines potentially could cause adverse impacts to outstandingly remarkable scenic values from soil erosion and increased stream turbidity, loss of natural

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vegetation, noise, and new roads associated with these operations. Although reclamation is required by the mining laws, enforcement may not be possible. No bond is required of the small mine operators.

- **Conclusion**

Implementation of the no action alternative would have potential adverse impacts on the outstandingly remarkable scenic values. The development of small mines could negatively impact these values.

The outstandingly remarkable scenic values would not benefit from long-term legislative protection.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The area supports a variety of fish and wildlife species, discussed in Chapter III. Six federally listed or candidate species have been observed in the study area, including bald eagles and peregrine falcons, both federally listed endangered species.

Lowland leopard frogs, Mexican garter snakes, and desert tortoise, all category 2 species, inhabit portions of the area. Gila chubs, a native fish species also assigned to category 2, are present in Silver Creek above its confluence with the Agua Fria River.

According to the U.S. Fish and Wildlife Service, any of nine additional listed or candidate species may be present along the Agua Fria River in Yavapai County.

Common black hawks, a state special status species, range along the Agua Fria River and are known to nest in Silver Creek and Lousy Canyon.

No special status plants are known to exist in the Agua Fria River study area. Although not yet observed, it is possible that Hohokam agave, a category 2 species, may be associated

with archaeological sites on the mesas.

Under the no action alternative, the entire area would remain open to mineral entry. According to the mineral development scenarios used in this document, a projected six small mining operations smaller than five acres and employing fewer than five people would be developed within the next 20 years.

On 2,160 acres in the Perry Mesa Area of Critical Environmental Concern, approved plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b). On the remaining 4,550 acres of the study area, the development of small mines potentially could cause adverse impacts to outstandingly remarkable fish and wildlife habitat values from soil erosion and increased stream turbidity, loss of natural vegetation, noise, and new roads associated with these operations. Although reclamation is required by the mining laws, enforcement may not be possible. No bond is required of the small mine operators.

The drainage of pollutants from abandoned mines on private land could lead to a decline in water quality causing an indirect adverse impact on fish and wildlife habitat.

- **Conclusion**

Implementation of the no action alternative would have potential adverse impacts on the outstandingly remarkable fish and wildlife habitat values. The development of small mines could negatively impact these values.

The outstandingly remarkable fish and wildlife habitat values would not benefit from long-term legislative protection.

Impacts on Outstandingly Remarkable Cultural Resource Values

The Perry Mesa region contains one of the largest complexes of late prehistoric sites in central Arizona. The several hundred

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archaeological sites include large and small stone pueblos, impressive petroglyph sites, agricultural field areas, and artifact scatters without structures.

Although most of the sites are situated on the mesa tops and in the upper canyons of Perry Mesa and Black Mesa, some are located in the canyon bottoms. At least 40 archaeological sites have been recorded within the boundaries of the study area.

The most serious threat to these sites is physical damage and loss of scientific data from illegal excavation and artifact collecting. A study of site vandalism on Perry Mesa, funded by the Bureau of Land Management and Tonto National Forest, indicated that although it remains a problem, the incidence of vandalism has declined within the past two decades (Ahlstrom et. al. 1992).

The area of critical environmental concern currently is patrolled by Bureau of Land Management rangers, and in conjunction with cooperative agreements, by the Arizona Site Stewards and the Civil Air Patrol. Continued surveillance would protect outstandingly remarkable cultural resource values by reducing damage to sites by vandalism.

Protection for the outstandingly remarkable cultural resource values would be provided by ongoing management activities described in Chapter II.

An expanded Perry Mesa National Register of Historic Places District would be established, and the Bureau of Land Management would continue to work with the Tonto National Forest to inventory and evaluate sites in the canyons and on Perry and Black mesas.

Inventory and evaluation would protect cultural resource values by providing information critical to the development of site-specific protection and stabilization strategies.

Under the no action alternative, mineral entry,

mineral leasing, and materials disposals would not be prohibited. On 2,160 acres in the Perry Mesa Area of Critical Environmental Concern, approved plans of operations would be required for all activities above the level of casual use as defined at 43 CFR 3809.0-5(b). On the remaining 4,550 acres of the study area, the development of small mines potentially could cause adverse impacts to outstandingly remarkable cultural resource values from erosion and increased human traffic associated with these operations.

• Conclusion

Implementation of the no action alternative would have potential adverse impacts on the outstandingly remarkable cultural resource values. The development of small mines could negatively impact these values.

The outstandingly remarkable cultural resource values would not benefit from long-term legislative protection.

Impacts on Mineral Development

This portion of the Agua Fria River flows through a part of the Burmister manganese district and through one of the four parts of the Richinbar gold district. Numerous mining claims exist throughout the river basin. Eleven claims are located in segment 1 and 29 claims in segment 2. Currently, mining activity consists of small-scale exploration and recreational gold panning in the river's placer gravels. There are no major mining operations producing minerals in commercial quantities.

According to the mineral development scenarios used in this document, a projected six small mining operations smaller than five acres and employing fewer than five people would be developed within the next 20 years. No larger operations are anticipated.

Under the no action alternative and in accordance with the Phoenix Resource Management Plan, the entire area would remain

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open to mineral entry, leasing, and material disposals. Plans of operations would be required for all locatable mineral development, other than casual use as defined at 43 CFR 3809.0-5(b), on 2,160 acres in accordance with management prescriptions for the Perry Mesa Area of Critical Environmental Concern.

- **Conclusion**

Implementation of the no action alternative would have no adverse impact on mineral development.

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Agua Fria wild and scenic river suitability environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Phoenix Resource Management Plan Amendment (1994) that the Agua Fria River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Phoenix Resource Management Plan Amendment is on file at the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Agua Fria River Wild and Scenic Study Area were held in Wickenburg on April 7 and Phoenix March 14, 1993. Seventeen to 20 people attended the Wickenburg meeting and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in

January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made

AGUA FRIA WILD AND SCENIC RIVER STUDY AREA

personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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Bureau of Land Management, 1994

**ARAVAIPA CREEK
WILD AND SCENIC RIVER STUDY AREA**

**GILA RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

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ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Aravaipa Creek were identified in the Safford District Resource Management Plan (Partial Record of Decision, 1992) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Aravaipa Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Aravaipa Creek study area is in southeastern Arizona north of the Galiuro Mountains in eastern Pinal County and western Graham County. The creek lies 90 miles southeast of Phoenix, 55 miles northeast of Tucson, and 40 miles west of Safford, Arizona. Aravaipa Creek is administered by the Gila Resource Area in the Safford District.

The stretch of river under consideration covers 10 miles from the mouth of Turkey Creek to a point approximately 0.5 mile downstream of the confluence of Hell's Half Acre Canyon. The area is contained between the NW 1/4 SW 1/4, Sec. 19, T.6S, R.19E. and the NW1/4 SE1/4, Sec. 19, T.6S., R.17E.

The study area ranges in elevation from 2,640 to 3,000 feet, and is in the Sonoran Biotic Community, and the Mexican Highlands Section of the Basin and Range Physiographic Province. Aravaipa Creek lies in the San Pedro River Basin and drains into the San Pedro River. The Aravaipa Canyon watershed covers about 541 square miles and nearly 69 percent of the watershed is upstream from the eastern boundary of the study area.

The study area consists of a single 10-mile segment totalling 3,200 acres, 100 percent of it public land. The river segment has been tentatively classified as Wild. The river is free-flowing with undeveloped shorelines and has outstandingly remarkable scenic, recreational, and fish and wildlife habitat values.

The Bureau of Land Management conducted suitability assessments for the river segment during 1993.

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE AC-1
WILD AND SCENIC RIVER STUDY AREA**

ARAVAIPA CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	10.0	0	0	10.0
PERCENT	100	0	0	100
TOTAL ACRES	3,200	0	0	3,200
PERCENT	100	0	0	100
SUBSURFACE MINERALS ACRES	3,200	0	0	3,200

C. INTERRELATIONSHIPS

1. Bureau of Land Management

Turkey Creek, a tributary immediately upstream from the Aravaipa Creek Study Area, also is being considered for inclusion in the National Wild and Scenic Rivers System. Turkey Creek is the subject of a separate environmental impact statement.

Aravaipa Creek is entirely in the Aravaipa Canyon Wilderness, which was first designated by Congress in 1984. A management plan was written for the area in 1988. The Arizona

Desert Wilderness Act of 1990 added 12,711 acres to the original wilderness bringing the total to 19,410 acres. The study area is also in the 21,900 acre Aravaipa Canyon/Turkey Creek Special Recreation Management Area.

The Aravaipa Creek study area is in portions of the South Rim, Hell Hole, Dry Camp and Painted Cave Allotments. A coordinated resource management plan will be developed to direct the management of Bureau of Land Management's multiple-use programs on public lands in the Aravaipa Creek watershed. This master plan will include all affected resource programs in the area.

**TABLE AC-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE ARAVAIPA CREEK
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

ARAVAIPA CREEK RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Aravaipa Canyon Wilderness	3,200	100
Aravaipa Canyon/Turkey Creek Special Recreation Management Area	3,200	100

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

2. State

The study area is in the Arizona Game and Fish Department Management Units 31 and 32.

3. Local and Private

There is no private land in the study area. A cooperative management agreement between the Bureau of Land Management and The Nature Conservancy will be prepared for the Aravaipa area.

D. SCOPING

Scoping meetings specifically highlighting the Aravaipa Creek wild and scenic river study area were held in Winkelman April 12, 1993, Tucson April 13, 1993, and Klondyke April 21, 1993. Ten people attended the Winkelman meeting, 35 to 40 were at the Tucson meeting, and 21 to 25 attended the Klondyke meeting.

Identified Issues

- Impacts on recreational use (including requirements of the Americans With Disabilities Act)
- Impacts on future rights-of-way and development
- Impacts on mineral development
- Impacts on public access
- Impacts on livestock grazing
- Impacts on the local economy and on social well-being
- Impacts on flow regimes
- Impacts on water rights
- Impacts on dual designation
- Impacts on the federal budget from planning and managing for designation
- impacts on air quality
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable recreational values
- Impacts on outstandingly remarkable fish and wildlife habitat values

Issues Not Receiving Further Analysis

- Impacts on recreational uses (including Americans With Disabilities Act) were identified during the scoping process.

Recreation is an outstandingly remarkable value and is discussed in detail later.

Any discussion of impacts associated with implementation of the Americans With Disabilities Act would be discussed in the Wild and Scenic Rivers Management Plan if Aravaipa Creek is designated by Congress.

- Impacts on mineral development

The study area was closed to mining and mineral leasing when the wilderness was designated in 1984. There were no mining claims or mineral leases at the time of designation.

This issue will not be analyzed further.

- Impacts on future rights-of-way

In rivers designated as Wild new transmission lines, including natural gas lines and water lines are discouraged unless specifically authorized by other plans, orders, or laws. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of way. Where new rights-of-way are unavoidable, locations and construction techniques shall be selected to minimized adverse effects on Wild river area related values and fully evaluated during the site selection process (BLM Manual Section 8351.51A2i, May 19, 1992).

This issue will not be considered further.

- Impacts on public access

There are no roads in the study area; new roads in the wilderness are not allowed. An

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

undeveloped trail extends the length of the study area.

No new access development is anticipated.

This issue will not be considered further.

- Impacts on livestock grazing

Livestock grazing has been excluded from the canyon bottom in the study area since 1974.

This issue will not be considered further.

- Impacts on water rights

The Bureau of Land Management was granted an instream flow permit in 1989 for an average daily flow of 15 cubic feet per second or 10,840 acre-feet per year. The Bureau estimates that 10 cubic feet per second are needed for fish and wildlife purposes and five cubic feet per second for recreation. The Bureau of Land Management uses the East End gage to monitor flows granted in the permit.

Designation as a Wild, Scenic, or Recreational river would not have any effect on existing, valid water rights. When a river segment has been designated, the Bureau of Land Management would have the responsibility to preserve that segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility has been or would be determined through assessments of instream flow needs.

The Wild and Scenic Rivers Act creates a Federal water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. Water rights have already been acquired or applied for on many of the proposed river segments. These have been either state appropriative or federal reserved when established by Congress. Water rights quantification is on-going through the state appropriative process.

Existing water rights are protected. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

- Impacts on the local economy and population

The Aravaipa Creek Wild and Scenic River Study Area is entirely within the Aravaipa Canyon wilderness area which has a limitation on visitor use based on capacity.

Congressional designation of the Aravaipa Creek as Wild would not measurably change visitor use. There would be no effect on the local economy or the level of social well-being.

This issue will not be discussed further.

- Impacts on dual designation

Dual designation, in which a wild and scenic river designation would be made within an area already protected under wilderness would have no environmental or management problems. Management actions would comply with the most stringent requirements.

This issue will not be considered further.

- Impacts on flow regimes

The perennial flow regimes of Aravaipa Creek would not be affected by wild and scenic river designation. An instream flow water right has been granted for Aravaipa Creek.

This issue will not be considered further.

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

- Impacts on the federal budget from this planning effort

The Wild and Scenic Rivers Act requires that all eligible rivers be considered for inclusion in the National Wild and Scenic Rivers System.

This issue will not be considered further.

- impacts on air quality

The implementation of the management actions associated with any of the alternatives would not have impacts on air quality because there would be no surface disturbances and no particulates would be released into the atmosphere in the Aravaipa Creek study area.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Aravaipa Creek study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative (all suitable/wild)
No action (not suitable)

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines the entire 10-mile Aravaipa Creek study area to be suitable and recommends designation with a Wild classification.

Since the segment is entirely in the Aravaipa Canyon Wilderness Area the management of the segment would comply with the standards of the Wilderness Act and the Aravaipa Canyon Wilderness Management Plan.

Wild and Scenic River management actions

Wild and Scenic River designation would require certain management actions to be initiated. In accordance with the Bureau of Land ARAVAIPA Recommended alternative

Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur under designation of Aravaipa Creek as Wild. In the event that Wild and Scenic River management actions overlap ongoing management actions, the more stringent would be applied.

- Mineral entry, leasing and material disposals would be prohibited.
- Motorized travel would be prohibited.
- New dams, levees, and other types of diversions would be prohibited.

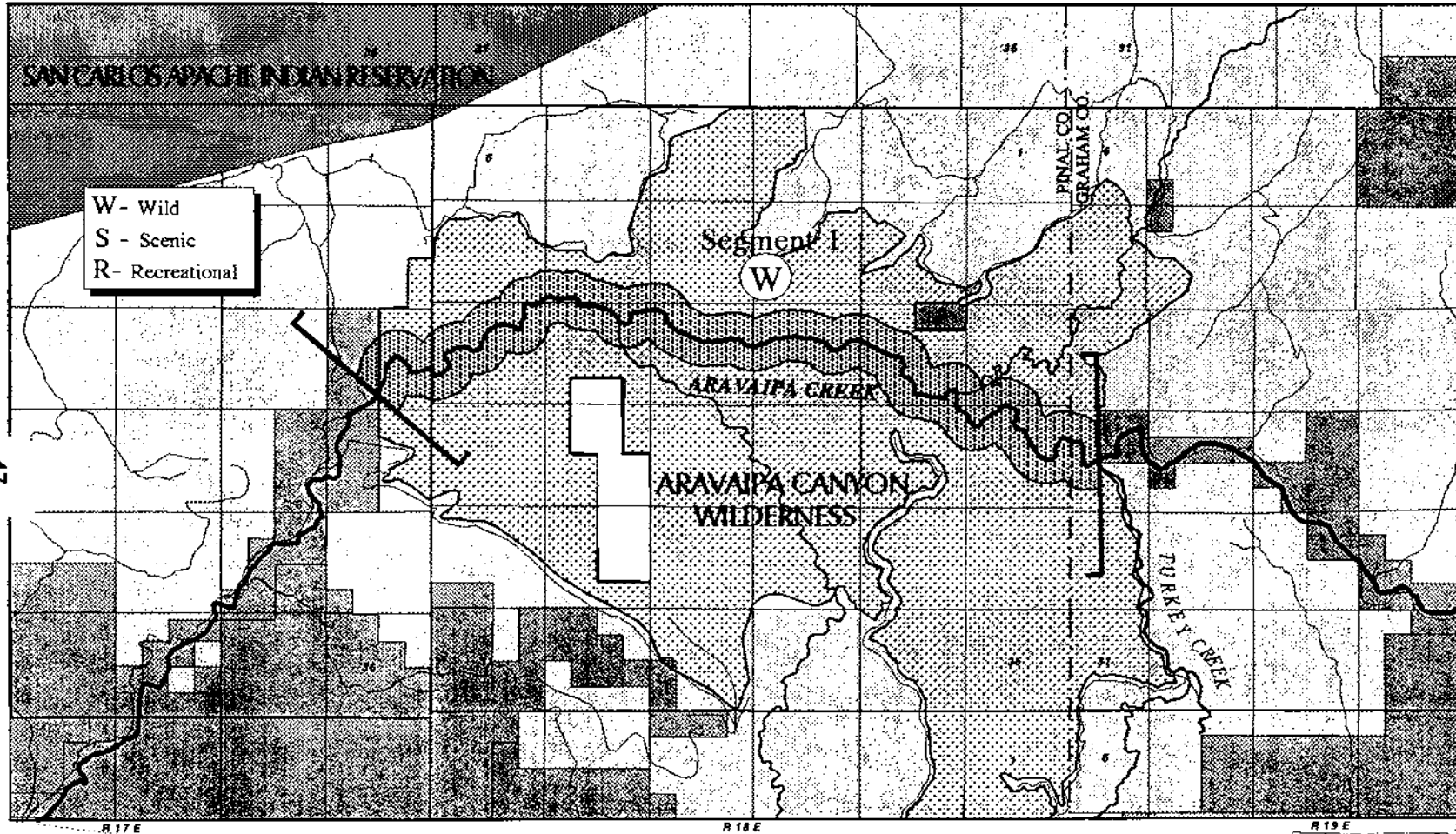
Ongoing management actions

Ongoing management actions in the Aravaipa Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Wilderness Management Plan, Aravaipa Canyon/Turkey Creek Special Management Area Plan and the Safford District Resource Management Plan.

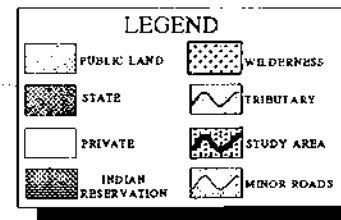
- Mineral entry or energy exploration would be prohibited in wilderness.
- Aravaipa Creek would be managed as a Visual Resource Management Class I area.
- To prevent exotic fish from entering Aravaipa Creek, and to protect the native fish in the study area, a low dam will be constructed across the creek about 3-4 miles downstream from the study area.
- New rights-of-way would be prohibited.
- Livestock grazing non-use will continue in the canyon to maintain the riparian habitat.

ARAVAIPA CREEK

(Recommended Alternative)



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- Proposed activities that could result in increased use or surface disturbance, would be reviewed by a cultural resource specialist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites evaluated as eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- The quality of Aravaipa Creek water would be maintained according to State water quality standards in accordance with the Aravaipa Canyon Wilderness Management Plan.

C. NO ACTION (NOT SUITABLE) ALTERNATIVE

The no action alternative determines the Aravaipa Creek study area to be nonsuitable and does not recommend it for designation into the National Wild and Scenic Rivers System.

Implementation of this alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple-use management prescriptions.

Wild and scenic river management actions

The no action alternative recommends nonsuitability for Aravaipa Creek. There would be no wild and scenic river management actions under this alternative.

Ongoing management actions

The Aravaipa Creek river study area is in the Aravaipa Canyon Wilderness area and the

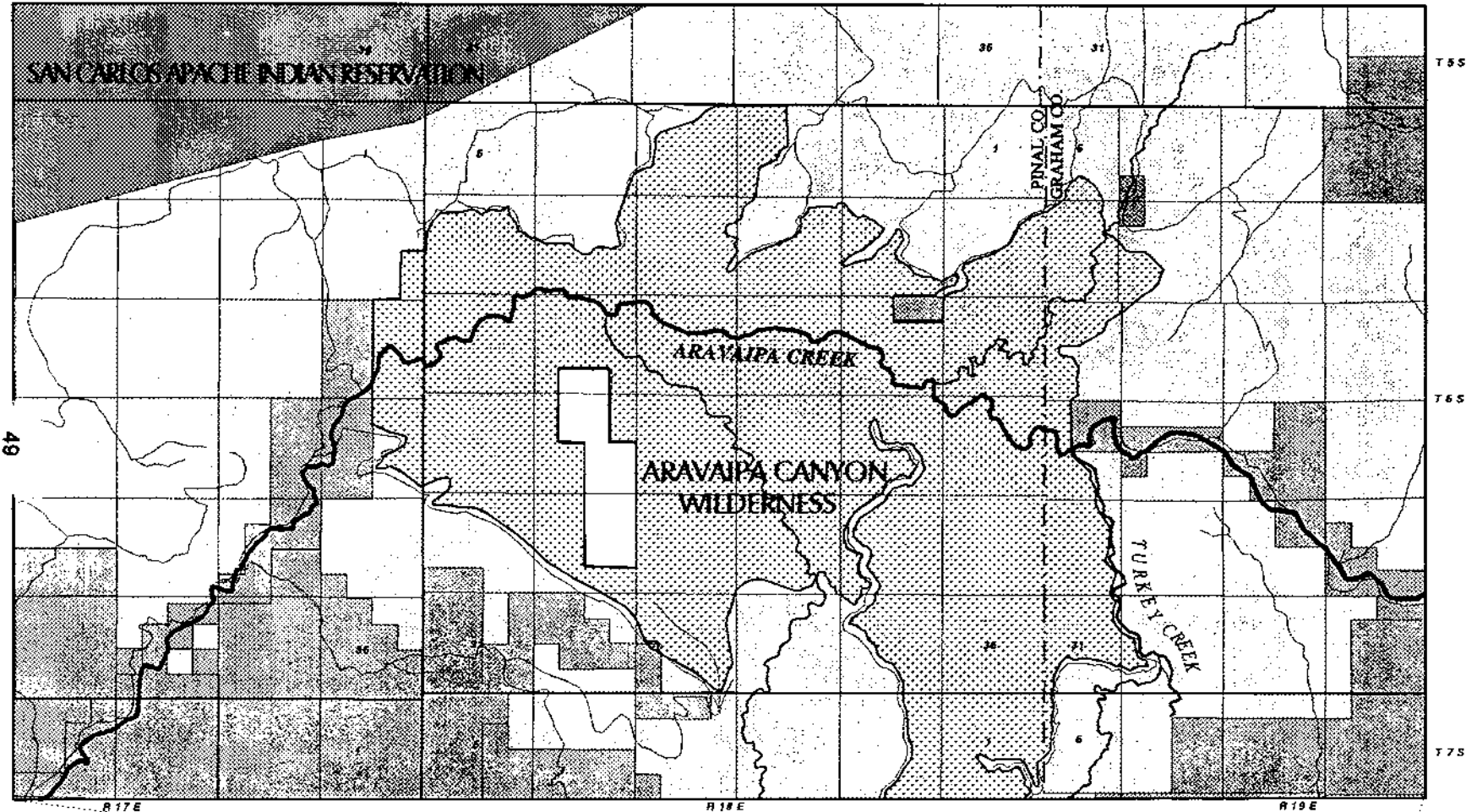
Aravaipa Creek Watershed. The study area would continue to be managed under the provisions of the Aravaipa Canyon Wilderness Management Plan (BLM 1998) and, when completed, the Aravaipa Creek Watershed Coordinated resource management plan.

Selected ongoing management actions are listed below.

- Mineral entry or energy exploration would be prohibited in wilderness.
- Aravaipa Creek would be managed as a Visual Resource Management Class I area.
- To prevent exotic fish from entering Aravaipa Creek, and to protect the native fish in the study area, a low dam will be constructed across the creek about 3-4 miles downstream from the study area.
- Livestock grazing non-use will continue in the canyon to maintain the riparian habitat.
- Proposed activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites evaluated as eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- The quality of Aravaipa Creek water would be maintained according to state water quality standards in accordance with the Aravaipa Canyon Wilderness Management Plan.

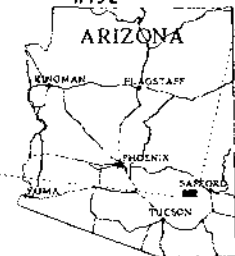
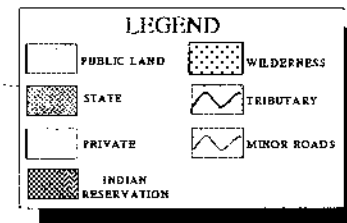
ARAVAIPA CREEK

(No Action Alternative)



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BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

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LOCATION DIAGRAM

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE AC-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative (all suitable)	No action (not suitable)
Outstandingly Remarkable Scenic Values	No adverse impacts; long-term legislative protection	No adverse impact; continued long-term legislative protection
Outstandingly Remarkable Recreational Values	No adverse impacts; long-term legislative protection	No adverse impacts; continued long-term legislative protection
Outstandingly Remarkable Fish and Wildlife Habitat	No adverse impacts; long-term legislative protection	No adverse impacts; continued long-term legislative protection

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Aravaipa Creek study area that could be affected by the implementation of the alternatives for recommending the river segment for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Safford District Resource Management Plan, the Aravaipa Wilderness Environmental Impact Statement, and the Aravaipa Creek wild and scenic suitability determination assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

Aravaipa Canyon is one of Arizona's scenic jewels of world renown. The creek flows through a narrow and colorful 1,000-foot deep canyon lined with a mature riparian forest. The combination of water, vegetation, and topography provides a variety in the landscape that produces outstanding scenery. Varied colors and textures in rock formations, contrasting colors and forms of the vegetation in the stream bottom (riparian) and on the canyon slopes (Sonoran Desert), and the linear flow of the perennial water provide the variety that creates the outstanding scene.

RECREATION

The creek is a popular destination for hiking, backpacking, observing wildlife, photography and sightseeing. Hunting occurs in portions of the wilderness during the fall and winter. Horseback riding in the Aravaipa Canyon Wilderness also occurs. Most visits occur during the spring and fall when temperatures are moderate and storms are uncommon. However, the climate allows year-round use.

Although people from throughout the United States and the world visit Aravaipa Canyon, the majority of visitors to the wilderness area come from Tucson and Phoenix. The scenery, the

desert stream and its tributaries and the opportunities for birding and observing bighorn sheep are the most famed attractions.

Visitor use statistics for Aravaipa Canyon have been kept since the mid-1970s. Over that period, visitor use has remained rather stable with the exception of the years 1980-82 when use increased dramatically, probably because of publicity about the pending wilderness designation. After the flood of October 1983, visitor use lessened for a year but has since risen to about 4,000 visitors each year.

FISH AND WILDLIFE HABITAT

Aravaipa Creek provides high-quality habitat for a wide variety of fish and wildlife species. The perennial water of Aravaipa Creek, besides furnishing habitat, allows for the growth of the canyon riparian vegetation. The high cliffs and rugged uplands provide habitat for additional wildlife.

Federally listed and candidate threatened or endangered species are found in the study area. These species include the American peregrine falcons (Falco peregrinus anatum), bald eagle (Haliaeetus leucocephalus) and the lesser long-nosed bat (Leptonycteris curasoae yerbabuena). The proposed endangered southwestern willow flycatcher (Empidonax traillii extimus) may also occur in the area.

According to the U.S. Fish and Wildlife Service, the cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum), a candidate category 1 species, may occur in the study area. The lowland leopard frog (Rana ludoviciana), southwestern cave bat (Myotis velifer brevis), and western mastiff bat (Eumops perotis californicus) are other federal candidate species in the area.

The black hawk (Buteogallus anthracinus), though having no federal status, is listed as a

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

State of Arizona candidate species. This raptor is uncommon in Arizona and the continuation of the species could be in jeopardy in the future. Nesting black hawks are sensitive to disturbance.

The deep canyon is home for a variety of other wildlife, including 46 mammals, 46 reptiles, 7 native fish and 8 amphibian species. In addition, more than 200 bird species ranging from permanent residents to rare or migrant species may be found in this area. The canyon area is not only rich in nongame species, particularly riparian bird species, but also mammals, amphibians and reptiles, including the desert tortoise (Gopherus agassizii) which has a low density population in the western part of the area in Sonoran desert habitat.

Yellow-billed cuckoos (Coccyzus americanus occidentalis), buff-collared nightjars (Caprimulgus ridgwayi), Northern beardless-tyrannulet (Camptostoma imberbe), black hawks and zone-tailed hawks (Buteo albonotatus) are some of the uncommon species doing well in the Aravaipa Canyon Wilderness.

Ringtail cats (Bassariscus astutus), coatis (Nasua narica), bobcats (Lynx rufus), gray fox (Urocyon cinereoargenteus), and raccoons (Procyon lotor) are among the 46 mammals known living in the canyon. Desert bighorn sheep (Ovis canadensis canadensis), wiped out in the 1930s and reintroduced in the late 1950s and 1973, have increased dramatically and are expanding their range.

The creek's seven native fish species include the loach minnow and the spikedace. These two species have been listed as threatened under the Endangered Species Act.

The other native fish found in Aravaipa Creek are roundtail chub (Gila robusta robusta), longfin dace (Agosia chrysogaster), speckled dace (Rhinichthys osculus), Sonoran sucker

(Catostomus insignis) and desert mountain sucker (Pantosteus clarki). The variety of aquatic habitats -- shallow riffles, deep pools, sandy bottoms and gravel bottoms -- allows for the variety of fish species.

Frequent and often heavy flooding maintains the native assemblage of fish. Exotic species tend to be flushed out of the system by flooding, but some (like green sunfish (Lepomis cyanellus)) persist in pools in the side drainages.

B. MINERALS

A mineral survey conducted in 1978 by the U.S. Geological Survey and the U.S. Bureau of Mines concluded that the area contains no minable ore deposits. Sand and gravel are present in Aravaipa Creek, but their remote location makes the resource commercially unattractive. No mining claims or mineral leases existed at the time of wilderness designation, therefore, there are no existing mineral rights in the study area.

C. LANDS

The entire wild and scenic river study area is in existing wilderness. There are no State or private lands in the study area. Access to the general vicinity of the study area from the west is by local roads from State Route 77, and from the east by local roads from U.S. Highway 70. Rights-of-way or other realty actions in the study area are not permitted.

D. RIPARIAN VEGETATION

The steep canyon slopes support closed chaparral, jojoba-mixed (Simmondsia chinensis) shrub and Sonoran desert vegetation communities. The canyon bottom contains an excellent mixed broadleaf riparian vegetation community.

Bermuda grass (Cynodon dactylon) and watercress (Nasturtium officinale) are not native

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

to the canyon, but have become established in the riparian zones.

Flooding can have a profound effect on the creek's riparian vegetation. Since the 1983 flood, it has been found that vegetation can reestablish along the creek in a reasonable time.

E. CULTURAL RESOURCES

Only about 10 percent of the entire Aravaipa Canyon Wilderness has been inventoried for cultural resources. It is known, however, that the canyon was inhabited as long as 10,000 years ago by the Cochise culture (10,000-2,000 years before present).

Cultural remains from the Hohokam, Mogollon and Salado people (1 AD-1450 AD) are found in the overhangs in the canyon walls and in the rim country above the canyon. In addition to accounts by explorers, the military and historians, rock shelters provide evidence of Apache use from about 1500 AD to 1871 AD.

During historic times the canyon was used by Hispanic and Anglo-American travellers as a pass through the mountains.

Most of the known cultural sites have been heavily impacted by casual collectors and professional pot-hunters. A visitor brochure available to wilderness visitors provides a brief interpretation of the cultural history.

F. WATER RESOURCES

The Bureau of Land Management was granted an instream flow permit in 1989 for an average daily flow of 15 cubic feet per second or 10,840 acre-feet per year. The Bureau estimates that 10 cubic feet per second are needed for fish and wildlife purposes and five cubic feet per second for recreation. The Bureau of Land Management uses the east end gage to monitor flows granted in the permit.

The Arizona Department of Environmental Quality has designated Aravaipa Creek as a Unique Waters. Average flows range from approximately 18 cubic feet per second at the east end of the canyon to about 25 cubic feet per second at the west end.

G. LIVESTOCK GRAZING

The Aravaipa Creek study area is in portions of the South Rim, Hell Hole, Dry Camp and Painted Cave Allotments. The canyon bottom is used a few times each year to trail cattle. Livestock grazing has been excluded from the canyon bottom by an enclosure fence since 1974.

Painted Cave is the only one of the four allotments without an allotment management plan. In the next 20 years, existing livestock management facilities would be maintained, but no new construction is anticipated.

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Aravaipa Creek study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act for any Congressionally designated wild and scenic river.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

Scenic, recreational, and fish and wildlife habitat have been identified as outstandingly remarkable values in the Aravaipa Creek study area.

Impacts on Outstandingly Remarkable Scenic Values.

Aravaipa Canyon is world famous. The creek flows through a narrow and colorful 1,000-foot deep canyon lined with a mature riparian forest. The combination of water, vegetation, and topography provides outstanding scenery. The outstandingly remarkable scenic values would be protected by prohibiting mineral entry, leasing, and mineral material disposals in the 3,200-acre study area. In addition, motorized travel would be prohibited on 3,200 acres. New dams, levees, and other types of diversions would be prohibited.

Additional protection for the outstandingly remarkable scenic values would be supplied

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

for the 3,200-acre study area by the ongoing management activities described in Chapter II.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable scenic values from implementation of the recommended alternative. Scenic values would receive long-term legislative protection.

Impacts on Outstandingly Remarkable Recreational Values

The creek is a popular destination for hiking, backpacking, observing wildlife, photography and sightseeing. Hunting occurs in the wilderness portion of the study area during the fall and winter. Horseback riding also takes place, but less frequently. Most visits occur during the spring and fall when temperatures are moderate and storms are uncommon. However, the climate allows year-round use. Although people from throughout the United States and the world visit Aravaipa Canyon, most visitors are from Tucson and Phoenix.

Visitor use statistics for Aravaipa Canyon have been kept since the mid-1970s. After the area was designated wilderness, visitor use increased. Visitor use is estimated at about 4,000 visitors annually.

The outstandingly remarkable recreational values would be protected by prohibiting mineral entry, leasing, and mineral material disposals in the 3,200-acre study area. In addition, motorized travel would be prohibited on 3,200 acres. New dams, levees, and other types of diversions would be prohibited.

Additional protection for the outstandingly remarkable recreational values would be supplied for the entire 3,200-acre study area by the ongoing management activities described in Chapter II. Management prescriptions contained in the Aravaipa Canyon Wilderness Management Plan would guide recreation in the

study area.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable recreational values from implementation of the recommended alternative. Recreational values would receive long-term legislative protection.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The Aravaipa Creek study area provides high-quality habitat for a wide variety of fish and wildlife species. The perennial waters furnish habitat and allow for the growth of riparian vegetation. The high cliffs and dissected uplands provide habitat for additional wildlife.

Federally listed and candidate threatened or endangered species are found in the study area. Endangered species include the American peregrine falcon, bald eagle and lesser long-nosed bat. The proposed endangered southwestern willow flycatcher may also occur in the area. According to the U.S. Fish and Wildlife Service, four additional candidate bird, amphibian, and bat species may occur in the study area.

The black hawk, though having no federal status, is listed as a State of Arizona candidate species. This raptor is uncommon in Arizona and the continuation of the species could be in jeopardy in the future. Nesting black hawks are sensitive to disturbance.

The canyon is home to seven native fish species. These include the loach minnow and the spikedace. Those two species have been listed as threatened under the Endangered Species Act. Other native fish are roundtail chub, longfin dace, speckled dace, Sonoran sucker and desert mountain sucker.

The outstandingly remarkable fish and wildlife habitat values would be protected by prohibiting mineral entry, leasing, and mineral material

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

disposals in the 3,200-acre study area. In addition, motorized travel would be prohibited on 3,200 acres. New dams, levees, and other types of diversions would be prohibited.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied for the entire 3,200-acre study area by the ongoing management activities described in Chapter II. Management prescriptions associated with the Aravaipa Canyon Wilderness Management Plan would guide the management of fish and wildlife habitat in the wild and scenic river study area.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable fish and wildlife values from implementation of the recommended alternative. Fish and wildlife habitat values would receive long-term legislative protection.

Cumulative effects of implementing the recommended alternative.

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Aravaipa Creek study area. Over most of the area the type of

actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with land use plans.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of the 3,200-acre Aravaipa Canyon Wilderness, the Aravaipa Creek/Turkey Canyon Special Recreation Management Area and management actions of the Safford District Resource Management Plan requiring the completion of environmental compliance documents prior to approving site specific activities.

Irreversible and irretrievable commitments of resources involved in the recommended alternative.

Since the implementation of the recommended alternative would not introduce any new impacts to the wilderness area, there would be no irreversible and irretrievable commitments of resources. Congress could act to rescind the wilderness area status and the wild and scenic river designation.

Unavoidable adverse effects.

Implementation of the recommended alternative would not have any measurable unavoidable adverse effects.

Short-term uses of the environment versus long-term productivity.

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

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C. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

The no action alternative recommends nondesignation for the entire Aravaipa Creek study area. The outstandingly remarkable scenic, recreational, and fish and wildlife habitat values identified in the eligibility evaluation would not receive long-term protection under the Wild and Scenic Rivers Act.

Under the no action alternative Aravaipa Creek would not be recommended as suitable for designation and the outstandingly remarkable values would not receive the long-term legislative protection of the Wild and Scenic Rivers Act. However, the outstandingly remarkable values would continue to receive legislative protection under the Wilderness Act.

The outstandingly remarkable values would be subject to the effects of actions allowable under the Aravaipa Canyon Wilderness Management Plan.

Impacts on Outstandingly Remarkable Scenic Values

Aravaipa Canyon is world famous. The creek flows through a narrow and colorful 1,000-foot deep canyon lined with a mature riparian forest. The combination of water, vegetation, and topography provides produces outstanding scenery.

Management actions under the no action alternative would comply with the wilderness management plan.

Mineral entry and energy exploration would be prohibited in wilderness. Recreation activities would be in accordance with the wilderness plan. Aravaipa Creek would be managed as a Visual Resource Management Class I area.

Livestock grazing non-use will continue in the canyon to maintain the riparian habitat.

The quality of Aravaipa Creek water would be maintained according to state water quality standards in accordance with the Aravaipa Canyon Wilderness Management Plan.

The remarkable scenic values would be protected by the ongoing management activities described in Chapter II.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable scenic values from implementation of the no action alternative. Scenic values would continue to receive legislative protection.

Impacts on Outstandingly Remarkable Recreational Values

The creek is a popular destination for hiking, backpacking, observing wildlife, photography and sightseeing. Hunting occurs in the wilderness portion of the study area during the fall and winter. Horseback riding also occurs. Most visits occur during the spring and fall when temperatures are moderate and storms are uncommon. However, the climate allows year-round use. Although people from throughout the United States and the world visit Aravaipa Canyon, most visitors are from Tucson and Phoenix.

Visitor use statistics for Aravaipa Canyon have been kept since the mid-1970s. After the area was designated wilderness visitor use increased to about 2,600 people annually and have gradually risen since then. Visitor use is estimated at about 4,000 visitors annually.

Management actions under the no action alternative would comply with the Aravaipa Canyon Wilderness Management Plan.

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For example, mineral entry and energy exploration would be prohibited in wilderness. Recreation activities will be managed in accordance with the Wilderness Plan. Aravaipa Creek will be managed as a Visual Resource Management Class I area.

Livestock grazing non-use will continue in the canyon to maintain the riparian habitat.

The quality of Aravaipa Creek water would be maintained according to State water quality standards in accordance with the Aravaipa Canyon Wilderness Management Plan.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable recreational values from implementation of the no action alternative. Recreational values would continue to receive legislative protection.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The Aravaipa Creek wild and scenic river study area provides high-quality habitat for a wide variety of fish and wildlife species. The perennial waters furnish habitat and allow for the growth of riparian vegetation. The high cliffs and dissected uplands provide habitat for additional wildlife.

Federally listed and candidate threatened or endangered species are found in the study area. Endangered species include the American peregrine falcon, bald eagle and lesser long-nosed bat. The proposed endangered southwestern willow flycatcher may also occur in the area. According to the U.S. Fish and Wildlife Service, four additional candidate bird, amphibian, and bat species may occur in the study area.

The black hawk, though having no federal status, is listed as a State of Arizona candidate species. This raptor is uncommon in Arizona and the continuation of the species could be in jeopardy in the future. Nesting black hawks are sensitive to disturbance.

The canyon is home seven native fish species. These include the loach minnow and the spikedace. Those two species have been listed as threatened under the Endangered Species Act. Other native fish are roundtail chub, longfin dace, speckled dace, Sonoran sucker and desert mountain sucker.

The remarkable fish and wildlife habitat values would be protected by the ongoing management activities described in Chapter II. For example, mineral or energy exploration would be prohibited in wilderness. Recreation activities will be in accordance with the wilderness plan. Aravaipa Creek would be managed as a Visual Resource Management Class I area. To prevent exotic fish from entering Aravaipa Creek, and to protect the native fish in the study area, a low dam will be constructed across the creek about 3-4 miles downstream from the study area. Livestock grazing non-use would continue in the canyon to maintain the riparian habitat.

The quality of Aravaipa Creek water would be maintained according to State water quality standards in accordance with the Aravaipa Canyon Wilderness Management Plan.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable fish and wildlife habitat values from implementation of the no action alternative. The outstandingly remarkable habitat values would continue to receive legislative protection.

ARAVAIPA CREEK WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Aravaipa Creek Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the draft environmental impact document began in January, 1993. The draft was available for a 90-day public review in early April, 1994. Preparation of the final environmental impact statement began in July, 1994.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan that Aravaipa Creek was eligible for further wild and scenic river study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Tucson Resource Area Office in Tucson and the Safford District Office, in Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

In 1993 scoping meetings specifically highlighting the Aravaipa Creek Wild and Scenic River Study Area were held in Winkelman April 12, Tucson April 13, and Klondyke April 21.

Ten people attended the Winkelman meeting, 35 to 40 were at the Tucson meeting, and 21 to 25 attended the Klondyke meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district

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offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This environmental impact document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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- 1991 Arizona Labor Market Information Newsletter 15 (2), Nonmetropolitan Counties Labor Force and Employment, 1990 Phoenix, Arizona
- ND Community Profiles Phoenix, Arizona (published periodically)

Arizona Game and Fish Department

- 1991 Arizona Rivers Assessment Data - Phase I Phoenix, Arizona, 1991

Arizona Rivers Coalition

- 1991 Arizona Rivers - Lifeblood of the Desert (A Citizens Proposal for the Protection of Rivers In Arizona), Phoenix, Arizona

Public Laws

- 1976 Public Law 94-579 as amended, The Federal Land Policy and Management Act of 1976
- 1970 Public Law 91-190 as amended, The National Environmental Policy Act of 1969
- 1968 90-542 as amended, Wild and Scenic Rivers Act of 1968

U.S. Bureau of Land Management

- 1993 Aravaipa Creek Potential Wild and Scenic River Suitability Assessment Phoenix, Arizona (1993)
- 1992 Manual Section 8351: Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, and Management Washington, DC
- 1991 Safford District Resource Management Plan and Final Environmental Impact Statement Safford, Arizona
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- 1990 Population Projections for Arizona Places, Arizona Revised Population Estimates: 1981-1989 and Population Projections, May, 1990 Washington, DC
- 1990 Population Estimates (1988) and Per Capita Income (1987) for Counties, Incorporated Places and Selected Towns and Townships: Arizona, 1990 Washington, DC

Bureau of Land Management, 1994

**BIG SANDY RIVER
WILD AND SCENIC RIVER STUDY AREA**

**KINGMAN RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

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BIG SANDY WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Big Sandy River were identified in the Kingman Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Big Sandy River to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Big Sandy Wild and Scenic River Study Area is located in Mohave County, Arizona. The study corridor extends southward from U.S. Highway 93, two miles south of Winkleup and 50 miles south of Kingman, to Alamo Lake. Before Alamo Dam was constructed in 1968 to create the flood control reservoir, the confluence of the Big Sandy and Santa Maria rivers marked the beginning of the Bill Williams River.

The Big Sandy River study area comprises a corridor about 27.9 miles long containing 8,730 acres, 48 percent of it public land (Map #). The study area is situated in the Kingman Resource Area of the Phoenix District. The river passes through public land, including the Arrastra Mountain Wilderness Area, and private land.

The Big Sandy River is perennial with intermittent reaches. The study area, located in the Basin and Range Physiographic Province, ranges in elevation from 1,400 to 2,000 feet.

Uplands bordering the river valley consist of rugged canyons and mountain slopes and rolling foothills composed primarily of precambrian granite and granite gneiss.

This area is one of the northernmost extensions of the Sonoran Desert's Arizona Upland subdivision. It is a transitional zone between the Sonoran and Mohave deserts. The Big Sandy River drains the Hualapai, Aquarius, and Poachie mountain ranges and feeds into the Bill Williams River, a major tributary of the lower Colorado River.

Livestock grazing is the major land use in this region.

The Big Sandy River, south of Highway 93, was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the Kingman Resource Management Plan.

The river is free-flowing and has outstandingly remarkable scenic and wildlife habitat values.

The Big Sandy River study area consists of two river segments, each with distinct characteristics and values.

Segment 1 extends for 18.7 miles from U. S. Highway 93 to the historic townsite of Signal, with approximately 37 percent of the corridor under Bureau of Land Management jurisdiction. This reach of the Big Sandy historically has sustained a perennial flow.

The Kingman Resource Management Plan eligibility study classified segment 1 as Scenic.

Segment 2 reaches for 9.2 miles from Signal to Alamo Lake; 75 percent of this corridor consists of public land. This lower segment is a broad, sandy course where the river flows intermittently.

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The Kingman Resource Management Plan eligibility study classified segment 2 as Wild. The northern course of the Big Sandy River,

from Highway 93 north to Trout Creek, was determined to be not eligible due to a lack of outstandingly remarkable values.

**TABLE BSR-1.
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

BIG SANDY RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	13.8		14.1	27.9
PERCENT	49.5		50.5	100.0
TOTAL ACRES	4,220		4,510	8,730
PERCENT	48.3		51.7	100.0

C. INTERRELATIONSHIPS

1. The Bureau of Land Management

The southern segment of the Big Sandy River passes through the Arrastra Mountain Wilderness Area, the largest wilderness area administered by the Bureau of Land Management in Arizona.

This immense area, incorporating mountainous zones adjacent to the Big Sandy and Santa Maria rivers, is topographically and environmentally diverse. Wilderness designation was based on outstanding opportunities for solitude, as well as exceptional scenic and natural qualities.

A draft Wilderness Management Plan for the Arrastra Mountain Wilderness Area is scheduled for completion in 1995.

The Three Rivers Riparian Area of Critical Environmental Concern, designated in the Kingman Resource Management Plan, incorporates the reach of the Big Sandy River north of the wilderness to the Burro Creek confluence. The Big Sandy, Santa Maria, and Bill Williams Rivers-Alamo Lake complex is one of the most extensive and significant remaining desert riparian ecosystems in Arizona.

The goal of the area of critical environmental concern designation is to protect and enhance riparian habitat and threatened and endangered species through ecosystem management.

The Big Sandy River study area is part of the Big Sandy Herd Management Area for feral burros. Large herds historically have inhabited the area surrounding Alamo Lake. The Kingman Resource Management Plan sets management prescriptions for herd management areas, with excess animals captured and offered for public adoption.

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**TABLE BSR-2.
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE BIG SANDY
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

BIG SANDY RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Arrastra Mountain Wilderness Area	2,583	29.6
Three Rivers Riparian Area of Critical Environmental Concern	1,009	11.6

2. Department of the Interior Agencies

The Bureau of Land Management is a partner in the Bald Eagle Nest Watch Program with the U.S. Fish and Wildlife Service.

The U.S. Geological Survey maintains a water monitoring station seven miles downstream from the Burro Creek confluence.

3. Federal Agencies

The Alamo Lake area is managed by the U.S. Army Corps of Engineers. In 1948, Public Land Order 492 established a withdrawal on approximately 19,400 acres of both public and non-public land for the construction and operation of Alamo Dam.

The Corps of Engineers manages Alamo Dam and regulates the levels of water in Alamo Lake. The peak water level could expand the lake as far north as Artillery Peak, as indicated on U.S. Geological Survey topographic maps. This would extend the lake northward into the lower segment of the Big Sandy River study area.

4. State of Arizona

In 1969, the Corps of Engineers entered into a recreation lease with the Arizona State Parks Board for the Alamo Lake State Park. The park is one of the major recreational fishing areas in Arizona. Recreational facilities include roads, docks, and campgrounds.

Under an agreement between the Corps of

Engineers and the Arizona Game and Fish Department, the Department manages wildlife in the Alamo Wildlife Area, which incorporates lands withdrawn under Public Land Order 492. The Department became the lead agency in the Bald Eagle Nest Watch Program in 1991.

5. County

The Big Sandy River study area is in Mohave County.

6. Private

Private ranches exist along the northern segment of the Big Sandy River study area. The historic abandoned townsite of Signal is located on private land.

D. SCOPING

Scoping meetings specifically highlighting the Big Sandy River study area were held in Bagdad April 5, 1993, Kingman April 6, 1993, and Phoenix on April 14, 1993. Ninety-five to 100 people attended the Bagdad meeting, 17 to 20 attended the Kingman meetings and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the river study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

Scoping Issues

- impact on use of private property.
- impact on existing flood control dikes in segment 1.
- impact on existing water pipelines and utility lines operated by Arizona Electric Power Cooperative, Inc., Mohave Electric Cooperative, Inc., and Citizens Utilities-Arizona Gas Division.
- impact on water rights.
- impact on federally-listed and candidate species.
- impact on riparian vegetation.
- impact on outstandingly remarkable scenic values.
- impact on outstandingly remarkable wildlife habitat values.
- impact on free-flowing nature from inundation by the backwaters of Alamo Lake.

Issues Considered But Not Addressed Further

- impact on use of private property.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- impact on existing flood control dikes in segment 1.

Existing low dams and water control facilities are permitted to remain in areas designated as Scenic. The Bureau of Land Management would require that facilities on public land be maintained so as to avoid adverse impacts to

the river's free-flowing nature and the outstandingly remarkable values.

There would be no impact on existing flood control dikes in segment 1.

This issue will not be discussed further.

- impact on existing water pipelines and utility lines operated by Arizona Electric Power Cooperative, Inc., Mohave Electric Cooperative, Inc., and Citizens Utilities-Arizona Gas Division.

The operation and maintenance of existing facilities within a right-of-way corridor would not be restricted by designation of the Big Sandy as a wild and scenic river. The Bureau of Land Management would require that maintenance of utility lines be conducted so as to avoid degradation of outstandingly remarkable scenic and wildlife habitat values.

There would be no impact on existing utility lines.

This issue will not be discussed further.

- impact on water rights.

A federal reserved right for that portion of the Big Sandy River in the Arrastra Mountain Wilderness Area was created by the Arizona Desert Wilderness Act of 1990. Quantification of this right is ongoing and the Bureau of Land Management will submit notification to the State of Arizona.

The Bureau of Land Management is also in the process of conducting an instream flow assessment for wildlife, fisheries and recreational values and filed an instream flow application with the Arizona Department of Water Resources in February, 1994 (No. 33-96348).

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

There would be no impact on water rights.

This issue will not be discussed further.

- Impact on federally-listed and candidate species.

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species. Impacts on federally-listed or candidate species will be analyzed in the discussion of impacts on the outstandingly remarkable wildlife habitat values.

- Impact on riparian vegetation.

Impacts on riparian vegetation will be analyzed in the discussion of impacts on the outstandingly remarkable wildlife habitat values.

D. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft **environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Big Sandy River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of Wild and Scenic River designation or the area being returned to management under current plans.

The following alternatives are addressed:

Recommended alternative (part suitable)
All suitable
No action

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines 6.2 miles (2,190 acres) of the 9.2 mile long segment 2 as suitable and recommends the segment for designation as Wild. The segment is entirely in the Arrastra Mountain Wilderness Area.

The recommended alternative determines the 18.7 mile long segment 1 (2,030 acres) as nonsuitable and does not recommend designation. The segment includes 1,009 acres in the Three Rivers Riparian Area of Critical Environmental Concern and 393 acres in the Arrastra Mountain Wilderness Area. The remaining 628 acres of public land also is determined nonsuitable and would not be recommended for designation.

Wild and Scenic River management actions

Wild and Scenic River designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur with the designation of Big Sandy segment 2 as Wild. In case Wild and Scenic River management actions overlap ongoing management actions, the more stringent action would apply.

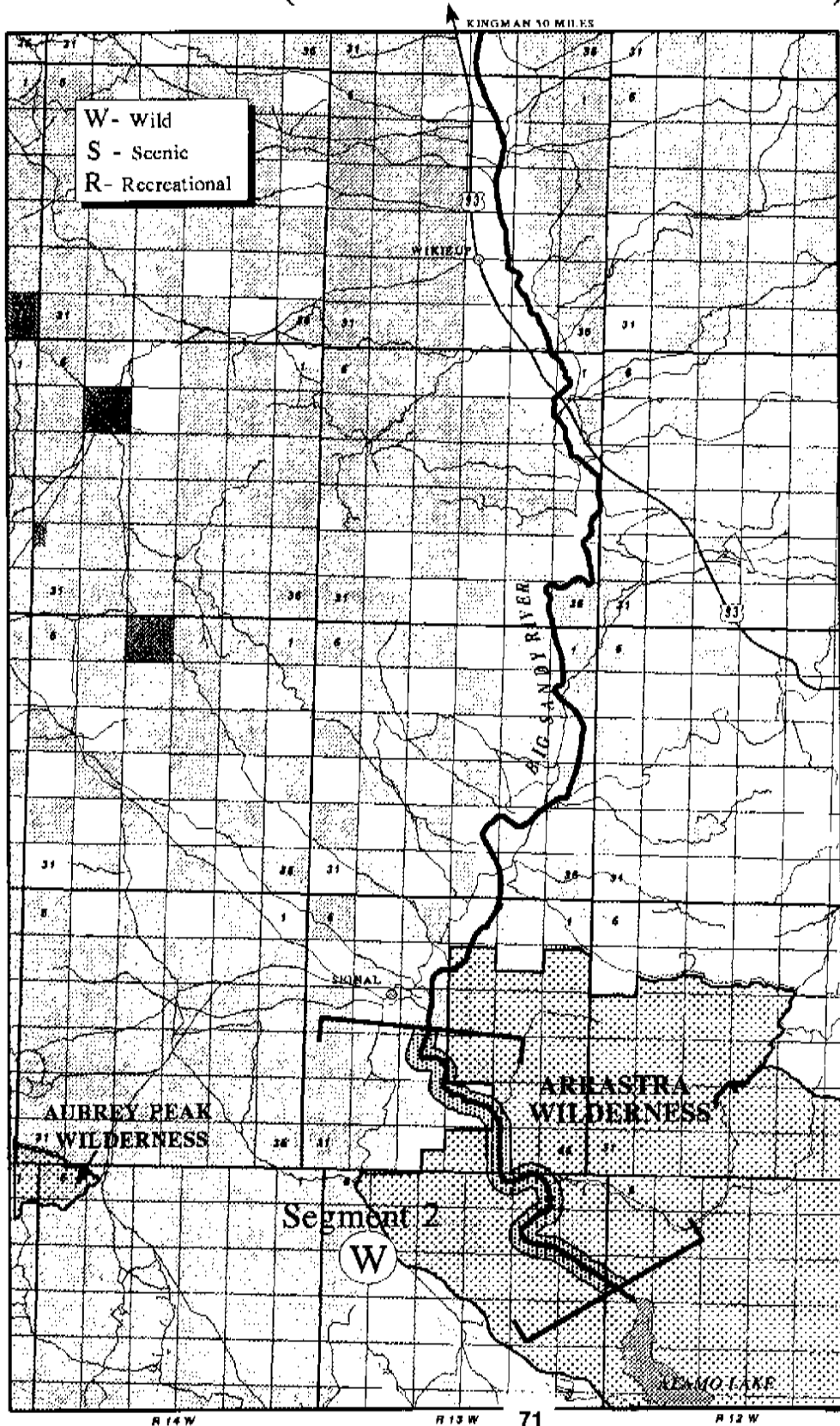
Segment 2 is located entirely in the Arrastra Mountain Wilderness Area. The following actions would be applicable under the provisions of wild and scenic river management and are currently applicable under wilderness management.

- The area would be withdrawn from mineral entry and closed to mineral leasing and material disposals.
- Approved plans of operations would be required for all mining related activities above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Construction of new roads or trails would be prohibited, subject to valid existing rights.
- Motorized travel would be restricted.

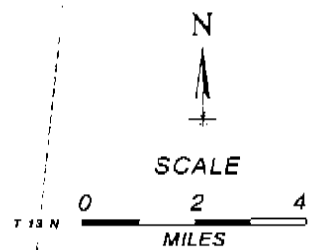
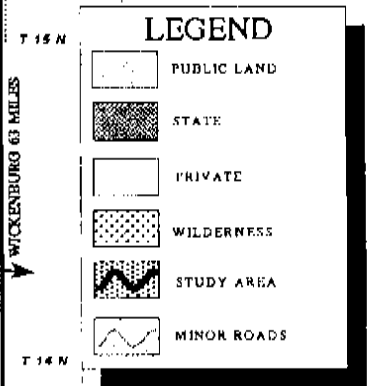
The following actions would be applicable only under wild and scenic river management.

- Mining patents would be restricted to the mineral estate only.
- New rights-of-way would be discouraged.

BIG SANDY RIVER (Recommended Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA
October 1994

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

- Campgrounds, Interpretive centers, or administrative headquarters would be prohibited.
- Livestock grazing use would be limited to the extent practiced prior to designation.
- Instream flow assessments would be conducted in order to establish the minimum flow necessary to protect the outstandingly remarkable scenic and wildlife habitat values.
- The construction of new dams, levees, hydropower facilities, or major types of diversions would be prohibited.

Ongoing management actions

Ongoing management actions in the Big Sandy River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Arrastra Mountain Wilderness Management Plan, the Kingman Resource Area Management Plan and management of the Three Rivers Riparian Area of Critical Environmental Concern.

Management actions associated with the Three Rivers Riparian Area of Critical Environmental Concern (1,009 acres), and 393 acres in the Arrastra Mountain Wilderness Area would apply to the 2,030-acre portion of the study area recommended for nondesignation. The 628 remaining acres of public land in the segment recommended for nondesignation would be covered by management actions in the Kingman Resource Area Management Plan.

- In the area determined not suitable for designation, 393 acres in the Arrastra Mountain Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights.
- Motorized travel is prohibited on the 393 acres determined not suitable for designation in

the Arrastra Mountain Wilderness Area.

- The 1,009 acres in the area of critical environmental concern would be recommended for withdrawal from new mineral entry, subject to valid existing rights. Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mineral material disposals of saleable sand, gravel, and related deposits would be prohibited, and no surface occupancy stipulations would be required for leasable mineral development on 1,009 acres in the area of critical environmental concern.
- The 628 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing and material disposals. Approved mining plans of operations would be required for locatable minerals operations which exceed the disturbance level of five acres as described in 43 CFR 3809.1-3.
- Efforts would be made to acquire up to 4,510 acres of non-federal land on a willing seller-willing buyer basis or by exchange.
- New road development would be prohibited within 1/2 mile of any bald eagle nest.
- Off highway vehicle use would be limited to designated roads and trails on 1,009 acres.
- Off highway vehicle use would be limited to existing roads and trails on 628 acres.
- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/4 mile of any bald eagle nest during breeding season from January 1 to June 1.
- Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
- The development of campgrounds would be

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

restricted to areas outside the riparian zone, the 100-year flood plain, and areas designated as Wild.

- Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
- The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
- The U.S. Fish and Wildlife Service Peregrine Falcon Recovery Plan would be incorporated into Habitat Management Plans.
- An all-aged stand of key native trees, shrubs, and grasses would be promoted.
- Removal of native plants would be prohibited except for salvage operations.
- Salt cedar would be eradicated on up to 420 acres.
- The riparian area condition evaluation inventory would continue.
- Formal notification of the federal reserved water right established at the time of designation of the Arastra Mountain Wilderness Area would be made to the Arizona Department of Water Resources.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Big Sandy River in accordance with the Kingman Resource Management Plan.
- Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing enclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
- Desired plant community descriptions would be developed and incorporated into Allotment Management Plans.

- Approximately 300 acres at the lower end of segment 2 would be closed to livestock grazing.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that the entire Big Sandy River study area is suitable for designation to the National Wild and Scenic Rivers System. Segment 1 (2,190 acres) would be suitable for designation as Scenic, and segment 2 (2,030 acres) suitable for designation as Wild.

Wild and Scenic River management actions

Wild and Scenic River designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur with the designation of segments as Wild and Scenic. In case Wild and Scenic River management actions overlap ongoing

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

management actions, the more stringent would apply.

Segment 2 is located entirely in the Arrastra Mountain Wilderness Area. The following actions would be applicable under the provisions of its management as a Wild river and are currently applicable under wilderness management.

- Public land in segment 2, designated Wild, would be withdrawn from mineral entry and closed to mineral leasing and material disposals.
- Construction of new roads or trails would be prohibited, subject to valid existing rights.
- Motorized travel would be restricted.

The following actions would be applicable to the entire area under Wild and Scenic River management.

- Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mining patents would be restricted to the mineral estate only.
- New rights-of-way would be discouraged. New facilities could be constructed in existing rights-of-way where no reasonable alternative exists. Facility design and construction techniques would be required to minimize adverse impacts on the outstandingly remarkable values.
- Campgrounds, interpretive centers, or administrative headquarters would be prohibited in the segment designated as Wild. Such facilities could be permitted in areas designated as Scenic if screened so as to protect outstandingly remarkable scenic values.
- Livestock grazing use would be limited to the extent practiced prior to designation.

- Instream flow assessments would be conducted in order to establish the minimum flow necessary to protect the outstandingly remarkable scenic and wildlife habitat values.

- The construction of new dams, levees, hydropower facilities, or major types of diversions would be prohibited on 13.8 miles of the Big Sandy River.

Ongoing management actions

Ongoing management actions in the Big Sandy River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Arrastra Mountain Wilderness Management Plan, the Kingman Resource Area Management Plan and management of the Three Rivers Riparian Area of Critical Environmental Concern.

Management actions associated with the Three Rivers Riparian Area of Critical Environmental Concern (1,009 acres), and 393 acres in the Arrastra Mountain Wilderness Area would apply to the 2,030-acre portion of the Study Area determined suitable. The 628 remaining acres of public land in the segment recommended for nondesignation would be covered by management actions in the Kingman Resource Area Management Plan.

- In the area designated as Scenic, 393 acres in the Arrastra Mountain Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights.
- Motorized travel is prohibited on those 393 acres in the Arrastra Mountain Wilderness Area.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

- The 1,009 acres in the area of critical environmental concern would be recommended for withdrawal from new mineral entry, subject to valid existing rights. Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mineral material disposals of saleable sand, gravel, and related deposits would be prohibited, and no surface occupancy stipulations would be required for leasable mineral development on 1,009 acres in the area of critical environmental concern.
- The 628 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing and material disposals. Approved mining plans of operations would be required for locatable minerals operations which exceed the disturbance level of five acres as described in 43 CFR 3809.1-3.
- Efforts would be made to acquire up to 4,510 acres of non-federal land on a willing seller-willing buyer basis or by exchange.
- New road development would be prohibited within 1/2 mile of any bald eagle nest.
- Off highway vehicle use would be limited to designated roads and trails on 1,009 acres.
- Off highway vehicle use would be limited to existing roads and trails on 628 acres.
- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/4 mile of any bald eagle nest during breeding season from January 1 to June 1.
- Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
- The development of campgrounds would be restricted to areas outside the riparian zone, the 100-year flood plain, and areas designated as Wild.
- Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
- The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
- The U.S. Fish and Wildlife Service Peregrine Falcon Recovery Plan would be incorporated into Habitat Management Plans.
- An all-aged stand of key native trees, shrubs, and grasses would be promoted.
- Removal of native plants would be prohibited except for salvage operations.
- Salt cedar would be eradicated on up to 420 acres.
- The riparian area condition evaluation inventory would continue.
- Formal notification of the federal reserved water right established at the time of designation of the Arrastra Mountain Wilderness Area would be made to the Arizona Department of Water Resources.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Big Sandy River in accordance with the Kingman Resource Management Plan.
- Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing exclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
- Desired plant community descriptions would be developed and incorporated into Allotment Management Plans.
- Approximately 300 acres at the lower end of segment 2 would be closed to livestock grazing.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

D. NO ACTION/NOT SUITABLE ALTERNATIVE

The no action alternative determines the Big Sandy River study area as nonsuitable and does not recommend it for inclusion in the National Wild and Scenic Rivers System.

Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

The study area incorporates 2,583 acres in the Arrastra Mountain Wilderness Area and 1,009 acres in the Three Rivers Riparian Area of Critical Environmental Concern. The remaining 628 acres of public land are not included in either the wilderness area or the area of critical environmental concern.

Wild and Scenic River management actions

The no action alternative recommends the Big Sandy River study area for nondesignation. Under this Alternative there would be no wild and scenic management actions.

Ongoing management actions

Under the no action alternative, the portion in the wilderness area would continue to be directed by the provisions of the Wilderness Act. Management of 1,009 acres would conform to the management objectives established in the Kingman Resource Management Plan for the Three Rivers Riparian Area of Critical Environmental Concern. The remaining 628 acres would not be covered by special management protection.

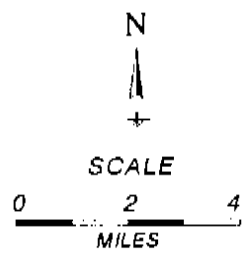
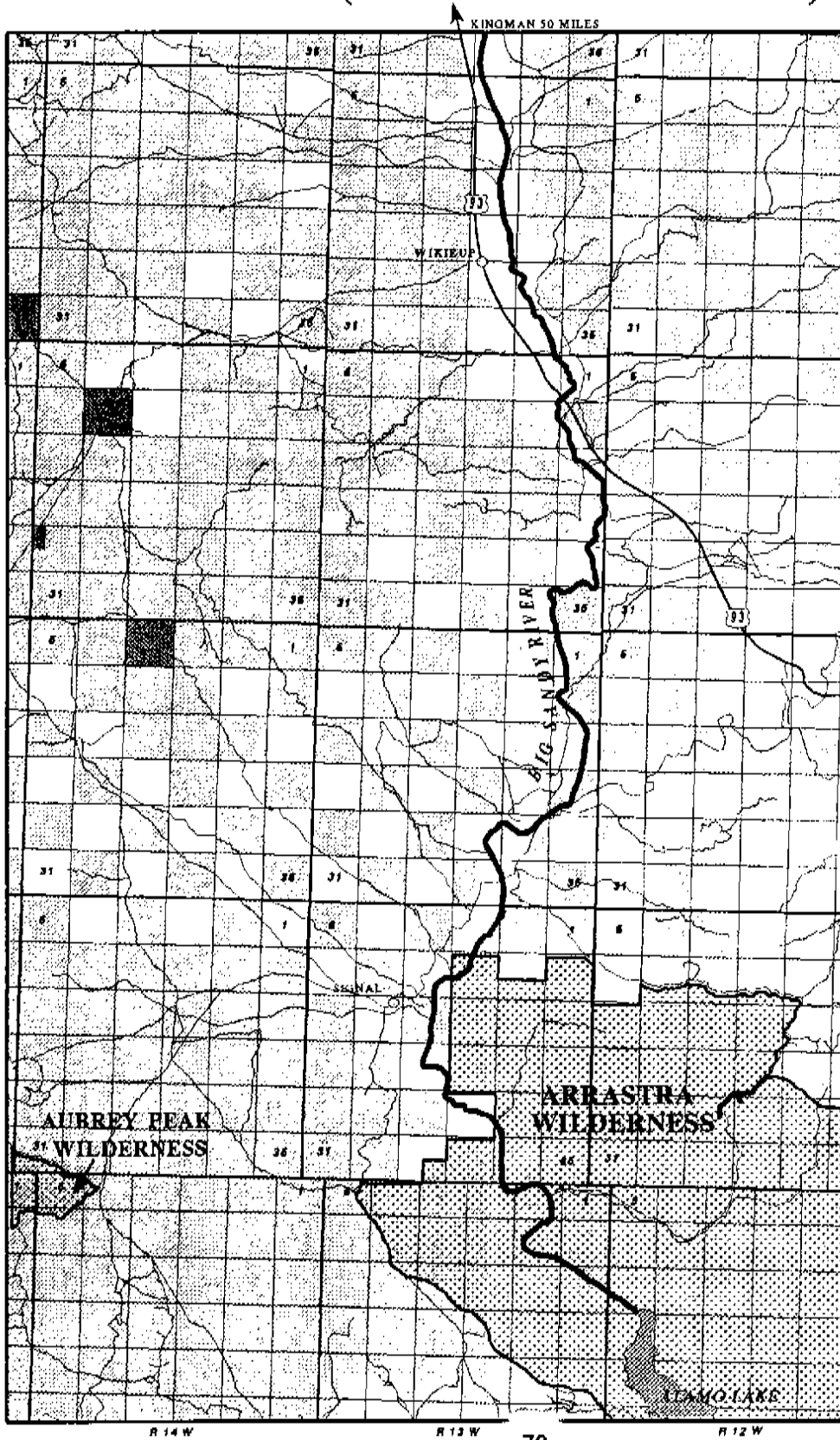
- The 2,583 acres of the Study Area in the Arrastra Mountain Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights.
- Within the wilderness area, approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Motorized travel is prohibited on 2,583 acres in the Arrastra Mountain Wilderness Area.
- The 1,009 acres in the area of critical environmental concern would be recommended for withdrawal from new mineral entry, subject to valid existing rights. Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mineral material disposals of saleable sand, gravel, and related deposits would be prohibited, and no surface occupancy stipulations would be required for leasable mineral development on 1,009 acres in the area of critical environmental concern.
- The 628 acres outside the wilderness area and the area of critical environmental concern

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

would remain open to mineral entry, leasing and material disposals. Approved mining plans of operations would be required for locatable minerals operations which exceed the disturbance level of five acres as described in 43 CFR 3809.1-3.

- Efforts would be made to acquire up to 4,510 acres of nonfederal land on a willing seller-willing buyer basis or by exchange.
- New road development would be prohibited within 1/2 mile of any bald eagle nest.
- Off highway vehicle use would be limited to designated roads and trails on 1,009 acres.
- Off highway vehicle use would be limited to existing roads and trails on 628 acres.
- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/4 mile of any bald eagle nest during breeding season from January 1 to June 1.
- Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
- The development of campgrounds would be restricted to areas outside the riparian zone, the 100-year flood plain, and areas designated as Wild.
- Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
- The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
- The U.S. Fish and Wildlife Service Peregrine Falcon Recovery Plan would be incorporated into Habitat Management Plans.
- An all-aged stand of key native trees, shrubs, and grasses would be promoted.
- Removal of native plants would be prohibited except for salvage operations.
- Salt cedar would be eradicated on up to 420 acres.
- The riparian area condition evaluation inventory would continue.
- Formal notification of the federal reserved water right established at the time of designation of the Arastra Mountain Wilderness Area would be made to the Arizona Department of Water Resources.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Big Sandy River in accordance with the Kingman Resource Management Plan.
- Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing enclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
- Desired plant community descriptions would be developed and incorporated into Allotment Management Plans.
- Approximately 300 acres at the lower end of segment 2 would be closed to livestock grazing.

BIG SANDY RIVER (No Action Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA
October 1994

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BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.

- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.

- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

E. ALTERNATIVES CONSIDERED BUT REJECTED

One alternative was suggested that would exclude existing utility corridors from designation. This alternative was rejected because these areas contain outstandingly remarkable scenic and wildlife habitat values.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE BSR-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative (part suitable)	All suitable alternative	No action (not suitable)
Outstandingly Remarkable Scenic Values	No adverse impact; potential adverse impact from lack of special protection on 628 acres in segment 1; Beneficial impact in segment 2 from long-term legislative protection	No adverse impact; Beneficial impact from long-term legislative protection	No adverse impact; potential adverse impact from lack of special protection on 628 acres in segment 1; Indirect adverse impact due to lack of legislative protection from inundation by Alamo Reservoir in lower segment 2
Outstandingly Remarkable Wildlife Habitat Values	No adverse impact; potential adverse impact from lack of special protection on 628 acres in segment 1; Beneficial impact in segment 2 from long-term legislative protection	No adverse impact; Beneficial impact from legislative protection	No adverse impact; potential adverse impact from lack of special protection on 628 acres in segment 1; Indirect adverse impact due to lack of legislative protection from inundation by Alamo Reservoir in lower segment 2
Potential for Inundation by Alamo Reservoir	No adverse impact on free-flowing nature; Beneficial impact long-term legislative protection	No adverse impact on free-flowing nature; Beneficial impact from long-term legislative protection	Indirect adverse impact on free-flowing nature due to lack of legislative protection from inundation by Alamo Reservoir in lower segment 2

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Big Sandy River study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Kingman Resource Management Plan, the Upper Sonoran Wilderness Environmental Impact Statement (1987), and the Big Sandy River Wild and Scenic suitability determination report (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Big Sandy River study area is distinguished by outstandingly remarkable scenic and wildlife habitat values.

The outstanding scenic qualities consist of diverse landforms including canyons, mountain slopes, rolling hills, and the broad river channel. The Artillery Mountains rise steeply to the west of the river, dominated by the striking red visage of Artillery Peak. To the east, the Poachie Range rises to nearly 5,000 feet. The riparian plant community, the diverse upland vegetation, and abundant wildlife complement the scenic landscape.

The outstandingly remarkable wildlife habitat values primarily reflect the importance of Alamo Lake and the Bill Williams tributaries as habitat for raptors and other avian species. The Big Sandy River is an important stopover area for migrating non-game birds and waterfowl. It provides winter and breeding habitat for bald eagles and could significantly contribute to a nucleus of bald eagles capable of recolonizing the Colorado River. The Big Sandy River is home to four federally-listed or candidate bird, reptile, and mammal species.

B. MINERALS

Much of the area incorporating the Big Sandy River study area has been classified as having low to moderate mineral potential. An area of high mineral potential surrounds the historic town of Signal, which served gold and silver mines located in the mountains (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

No mining occurs at the present time on the lands surrounding the portion of the Big Sandy River recommended for designation. However, there are prospect pits, adits and mine shafts from which some mine production may have occurred in the past. There is a potential for manganese and silver mineralization.

According to a recent review, there are 14 active mining claims within a corridor one mile on each side of the Big Sandy River. There is no mining activity on these claims.

The northern segment of the Big Sandy River study area does not have high mineral potential, according to the Kingman Resource Management Plan. The Arastra Mountain Wilderness is closed to new mineral entry. No extensive mineral development is expected to occur in the study area.

C. LANDS

The Kingman Resource Management Plan designates a utility corridor crossing segment 1 just north of its confluence with Burro Creek. Two major utility lines exist within the corridor. The Arizona Electric Power Cooperative, Inc., delivers power to the town of Bagdad through a 69 Kilovolt transmission line. Citizens Utilities-Arizona Gas Division delivers natural gas to the Cyprus Copper Company's mining operation at Bagdad.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

Mohave Electric Cooperative, Inc. services local customers via more than four miles of power line in the study area.

Several unpaved roads access the northern segment of the Big Sandy River study area. No major roads or highways traverse the area.

D. RECREATION

Excellent opportunities for primitive recreation exist where the Big Sandy River passes through the Arastra Mountain Wilderness. Hiking, backpacking, sight-seeing, hunting, birdwatching, photography, and gold panning are popular recreational activities. Prior to wilderness designation, off highway vehicle use was associated with hunting, prospecting, and recreational driving. During that time, recreational use of the lower Big Sandy area was estimated at 2,500 visitor days per year (Upper Sonoran Final Wilderness Environmental Impact Statement, 1987).

E. WILDLIFE

The Big Sandy River study area supports a highly diverse range of habitats and wildlife and serves as a stopover area used by migrating non-game birds and waterfowl. The special status species known to inhabit the area include federally listed and proposed species, federal candidate species, and state-listed threatened species.

A particularly significant aspect is the presence of bald eagles (Haliaeetus leucocephalus), a federally listed endangered species. The riparian zone provides a wintering area and excellent breeding habitat for the eagles. Peregrine falcons (Falco peregrinus anatum), also a federally listed endangered species, have been observed repeatedly during breeding season at Alamo Lake. Raptors also include osprey (Pandion halliaetus carolinensis) and Mexican black hawks (Buteo anthracinus anthracinus). Other special status birds are great egrets (Casmerodius albus), snowy egrets (Egretta thula), and western yellow-billed

cuckoos (Coccyzus americanus occidentalis).

Candidate Category II reptile and mammal species observed near the Big Sandy River include desert tortoise (Gopherus agassizii) and Yavapai Arizona pocket mice (Perognathus amplus amplus).

Native fish species are not known to exist in the Big Sandy River study area.

According to the U.S. Fish and Wildlife Service, several additional proposed or candidate species may be present along the Big Sandy River. These include Southwestern willow flycatchers (Empidonax traillii extimus), a bird species proposed for listing as endangered. Candidate Category II species potentially present in the area include ferruginous hawks (Buteo regalis), spotted bats (Euderma maculatum), California leaf-nosed bats (Macrotus californicus), loggerhead shrikes (Lanius ludovicianus), chuckwallas (Sauromalus obesus), Rosy boa snakes (Lichanura trivirgata), and Hualapai southern pocket gophers (Thomomys umbrinus).

F. VEGETATION

A paloverde-saguaro community dominates the uplands adjacent to the Big Sandy River. Unusual combinations of species, such as associations of juniper (Juniperus monosperma), Mohave yucca (Yucca schidigera), Joshua trees (Yucca brevifolia), palo verde (Cercidium microphyllum), saguaro cacti (Carnegiea gigantea), and creosote bush (Larrea tridentata), reflect the area's transitional position between the Sonoran and Mohave deserts.

Cottonwood-willow and mesquite bosque riparian communities exist along the river. Dominant trees include cottonwood (Populus fremontii), willow (Salix goodingii), mesquite (Prosopis juliflora), and screwbean mesquite (Prosopis pubescens). Salt cedar (Tamarix gallica), a non-native plant, is common through the area.

BIG SANDY RIVER WILD AND SCENIC RIVER STUDY AREA

No special status plants are known to exist in the Big Sandy River study area.

The seral stage is well below the potential according to measurements reported in the Kingman Resource Management Plan.

G. CULTURAL RESOURCES

Prehistoric artifact scatters and rockshelter sites have been recorded along the Big Sandy River. Many of these sites may represent seasonal camps. A particularly significant aspect of the lower segment is the presence of large lithic quarries where people in the prehistoric period manufactured stone tools from jasper and chalcedony raw materials.

The northern segment of the Big Sandy River study area was occupied historically by the Big Sandy band of the Hualapai people. In contrast to the more nomadic Hualapai bands inhabiting other areas, the Big Sandy band established farming villages occupied year-round along this perennial reach of the river. The exact locations of these villages, many of which were destroyed by the U.S. Cavalry during the 1870s, are unknown at this time.

The town of Signal, which served area mines and was quite prosperous during the 1870s and 1880s, is now one of the better known ghost towns in Arizona. It is located on private land.

H. WATER RESOURCES

A federal reserved right for that portion of the Big Sandy River in the Arrastra Mountain Wilderness Area was created by the Arizona Desert Wilderness Act of 1990. Quantification of this right is ongoing and the Bureau of Land Management will submit notification to the State of Arizona.

The Bureau of Land Management is also in the process of conducting an instream flow assessment for wildlife, fisheries and recreational values filed an instream flow application with the Arizona Department of

Water Resources in February, 1994 (No. 33-96348). and plans to file an instream flow application with the State of Arizona in early 1994.

According to data from the U.S. Geological Survey station located seven miles south of the Burro Creek confluence, the average discharge for the Big Sandy River is 78 cubic feet per second. The maximum discharge was 38,500 cubic feet per second registered on February 20, 1980; the minimum was 1.3 cubic feet per second on July 13, 1974 (U.S. Geological Survey 1992).

There are a number of individually-held water rights and existing wells in the non-wilderness portion of the river study area. Wells north of the area provide water to the Cyprus Bagdad mining operation.

Water quality and quantity need to be improved, according to data reported in the Kingman Resource Management Plan.

A potential problem exists with the proximity of the Alamo Lake and Alamo Dam to the southern portion of the Arrastra Mountain Wilderness Area. While there are no plans to do so, there is a potential for the level of Alamo Lake to be raised.

Were this to occur, inundation of the lower Big Sandy River by the backwaters of Alamo Lake could impede backcountry travel use and impair or destroy the outstandingly remarkable scenic and wildlife values.

The designation of the Arrastra Wilderness Area does not affect decisions on the water levels at the Alamo Dam.

I. LIVESTOCK GRAZING

The Big Sandy River study area incorporates portions of seven grazing allotments. Segment 1 is associated with the Winkleup, Greenwood Peak Community, Greenwood Community, Gray Wash, and Artillery Peak allotments. Portions of

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the Artillery Peak, Greenwood Community, D.O.R., and Chino Springs allotments are located in segment 2.

In total, these allotments include 165,787 acres administered by the Bureau of Land Management. The Artillery Peak Allotment contains over 76,171 acres of public land and has 4,016 authorized Animal Unit Months. The total preferred capacity on public land in the seven allotments equals 8,146 Animal Unit Months.

Most of the allotments contain a combination of perennial and ephemeral forage. The D.O.R. and Chino Springs allotments, encompassing 20,261 acres, are classified as ephemeral.

Most of the grazing allotments are in unsatisfactory condition, due in part to overgrazing by livestock and feral burros. Management goals are to improve currently unsatisfactory range conditions. On ephemeral allotments, grazing is authorized only when forage is abundant, which occurs infrequently in these particular areas.

In accordance with the Kingman Resource Management Plan, the Chino Springs allotment, including approximately 300 acres in the Big Sandy River study area, will be closed to livestock grazing. Only the Artillery Peak allotment has a completed Allotment Management Plan, signed in August 1983.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Big Sandy River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The life of the project and long term impacts is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through

assessments of instream flow needs.

7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

9. Management plans complying with the National Environmental Policy Act would be developed for any Congressionally designated Wild and Scenic River.

10. Any restrictions on mineral development would be subject to valid existing rights.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The Big Sandy River study area contains outstandingly remarkable scenic and wildlife habitat values.

Under the recommended alternative, segment 2 (2,190 acres) would be determined suitable and recommended for designation. Its outstandingly remarkable scenic and wildlife habitat values would receive special long-term legislative protection in addition to those provided in the Arrastra Mountain Wilderness Area.

Segment 1 (2,030 acres) would be determined nonsuitable and not recommended for designation. Its outstandingly remarkable values would not receive special long-term legislative protection under the Wild and Scenic Rivers Act.

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The outstandingly remarkable scenic and wildlife habitat values in the nonsuitable portion would be under the management of 1,009 acres in the Three Rivers Riparian Area of Critical Environmental Concern and 393 acres under the Arrastra Mountain Wilderness Area.

In the remaining 628 acres of public land in the Big Sandy River study area, the outstandingly remarkable values would not receive special long-term legislative or administrative protection.

Impacts on Outstandingly Remarkable Scenic Values

The outstanding scenic qualities consist of canyons, mountain slopes, rolling hills, and the broad river channel. The riparian plant community, the diverse upland vegetation, and abundant wildlife complement the scenic landscape.

The outstandingly remarkable scenic values would be protected by wilderness area and wild and scenic river management provisions prohibiting mineral entry, leasing, and mineral material disposals in segment 2, designated as Wild (2,190 acres). In addition, motorized use would be restricted on the 2,190 acres. These actions would prevent damage to scenic values from surface disturbance, the presence of machinery, noise, or increased human traffic. Under provisions of the Wild and Scenic Rivers Act, mineral development would be conducted so as to minimize negative impacts from visual impairment, surface disturbance, sedimentation, and pollution.

The prohibition of new dams, levees, and other types of diversions in segment 2 would retain the waterway in the condition it was when the outstandingly remarkable values were identified.

In the segment determined nonsuitable, scenic values on 393 acres in the Arrastra Mountain Wilderness would be protected under wilderness management provisions. Additional protection for the outstandingly remarkable

scenic values would be provided by ongoing management activities described in Chapter II, particularly those actions associated with management of the Three Rivers Riparian Area of Critical Environmental Concern. That area would be recommended for withdrawal from mineral entry, and mineral leasing and material disposals would be restricted. Motorized travel would be limited to designated roads and trails.

The outstandingly remarkable scenic values on 628 acres in the nonsuitable portion would not be protected by restrictions on mineral entry, leasing and material disposals. Restrictions on motorized travel would be less stringent, limiting travel to existing roads and trails. New rights-of-way would not be discouraged. New dams, levees, and other types of diversions would not be prohibited.

• Conclusion

In the Wild segment, there would be no adverse impacts on the outstandingly remarkable scenic values from implementation of the recommended alternative.

Implementation of the recommended alternative would provide protection for the outstandingly remarkable scenic values from the potential threat caused by raising the water level at Alamo Dam and the resulting inundation of the Big Sandy River from the backwaters of Alamo Lake.

The outstandingly remarkable scenic values on the 628 acres outside the wilderness area and the area of critical environmental concern would not have any special legislative or administrative protection.

A beneficial impact would result from long-term legislative protection of the outstandingly remarkable values in segment 2.

Impacts on Outstandingly Remarkable Wildlife Habitat Values

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The Big Sandy River study area provides habitat for varied species. Special status species include federally listed bald eagles and peregrine falcons. Candidate Category II species include desert tortoise and Yavapai Arizona pocket mice. Native fish are not known to be present.

Vegetation has been overgrazed by cattle and burros. The seral stage of the riparian areas is well below its potential, and the water quantity and quality need to be improved.

The outstandingly remarkable wildlife habitat values would be protected by wilderness area and wild and scenic river management provisions prohibiting mineral entry, leasing, and mineral material disposals in segment 2, designated as Wild (2,190 acres). In addition, motorized use would be restricted on the 2,190 acres. These actions would prevent damage to habitat values from surface disturbance, increased human traffic, or other conflicts associated with these activities. Under provisions of the Wild and Scenic Rivers Act, mineral development would be conducted so as to minimize negative impacts from visual impairment, surface disturbance, sedimentation, and pollution.

The prohibition of new dams, levees, and other types of diversions in segment 2 would retain the waterway in the condition it was when the outstandingly remarkable values were identified.

In the segment determined nonsuitable, wildlife habitat values on 393 acres in the Arrastra Mountain Wilderness would be protected under wilderness management provisions. Additional protection for the outstandingly remarkable wildlife habitat values would be provided by ongoing management activities described in Chapter II, particularly those actions associated with management of the Three Rivers Riparian Area of Critical Environmental Concern. That area would be recommended for withdrawal from mineral entry, and mineral leasing and material disposals would be restricted.

Motorized travel would be limited to designated roads and trails.

Prohibitions on roads, helicopter flights, and intensive recreational activities near bald eagle nests would protect wintering and breeding eagles from disturbance by humans.

Livestock grazing would be managed to improve currently unsatisfactory range conditions and protect riparian habitat. Approximately 300 acres at the lower end of segment 2 would be closed to livestock grazing.

The outstandingly remarkable wildlife habitat values on 628 acres in the nonsuitable portion would not be protected by restrictions on mineral entry, leasing and material disposals. Restrictions on motorized travel would be less stringent, limiting travel to existing roads and trails. New rights-of-way would not be discouraged. New dams, levees, and other types of diversions would not be prohibited.

• Conclusion

In the Wild segment, there would be no adverse impacts on the outstandingly remarkable wildlife habitat values from implementation of the recommended alternative.

Implementation of the recommended alternative would provide protection for the outstandingly remarkable wildlife habitat values from the potential threat caused by raising the water level at Alamo Dam and the resulting inundation of the Big Sandy River from the backwaters of Alamo Lake.

The outstandingly remarkable fish and wildlife habitat values on the 628 acres outside the wilderness area and the area of critical environmental concern would not have any special legislative or administrative protection.

A beneficial impact would result from long-term legislative protection of the outstandingly remarkable values in segment 2.

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Impacts from Potential Inundation by Alamo Lake

A potential problem exists with the proximity of the Alamo Lake and Alamo Dam to the southern portion of the study area. While there are no plans to do so, there is a potential for the level of Alamo Lake to be raised (Wild and Scenic Rivers Suitability Assessment, Bureau of Land Management, September, 1993).

Were this to occur, inundation of the Big Sandy River by the backwaters of the Alamo Lake could impede backcountry travel use, adversely affect the river's free-flowing nature, and impair or destroy outstandingly remarkable scenic and wildlife habitat values.

The designation of the Arrastra Mountain Wilderness Area does not affect decisions on the water levels at the Alamo Dam.

Under the Wild and Scenic Rivers Act, the special legislative protection for outstandingly remarkable scenic and wildlife habitat values in segment 2 would provide protection for the free flowing nature of the Big Sandy River.

- Conclusion

Implementation of the recommended alternative would have no adverse impact on the free-flowing nature and outstandingly remarkable values of the Big Sandy River. There would be a beneficial impact from long-term legislative protection that would limit the potential for inundation by Alamo Lake.

Cumulative effects of implementing the recommended alternative.

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant

actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a corridor approximately five miles on either side and both ends of the Big Sandy River study area.

Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Arrastra Mountain Wilderness Area and the Three Rivers Riparian Area of Critical Environmental Concern.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative.

Under the recommended alternative there would be no new mineral entry in the Arrastra Mountain Wilderness Area, and mineral activities in the remainder of the river study area would be under management prescription of the Three Rivers Riparian Area of Critical Environmental Concern and the Kingman Resource Management Plan.

Wilderness areas and wild and scenic river areas are created by legislative actions and areas of critical environmental concern are created by administrative decisions and subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects.

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the Arrastra Mountain Wilderness Area and the

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Three Rivers Riparian Area of Critical Environmental Concern Management.

Short-term uses of the environment versus long-term productivity.

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

Under the all suitable alternative, the Big Sandy River study area would be recommended for designation and the outstandingly remarkable values would receive special legislative protection in addition to that provided in the Arrastra Mountain Wilderness Area. Segment 1 (2,030 acres) would be designated as Scenic and segment 2 (2,190 acres) as Wild.

The Wild and Scenic River Act special protection would be provided to the 628 acres outside the Three Rivers Riparian Area of Critical Environmental Concern and the Arrastra Mountain Wilderness Area.

Impacts on Outstandingly Remarkable Scenic values

The outstanding scenic qualities consist of canyons, mountain slopes, rolling hills, and the broad river channel. The riparian plant community, the diverse upland vegetation, and abundant wildlife complement the scenic landscape.

The outstandingly remarkable scenic values would be protected by wilderness area and wild and scenic river management provisions prohibiting mineral entry, leasing, and mineral material disposals on 2,190 acres in segment 2, designated as Wild, and on 393 acres of wilderness in segment 1, designated as Scenic.

In addition, motorized use would either be prohibited or restricted in these areas. These actions would prevent damage to scenic values from surface disturbance, the presence of machinery, noise, or increased human traffic.

Under provisions of the Wild and Scenic Rivers Act, mineral development in both river segments would be conducted so as to minimize negative impacts from visual impairment, surface disturbance, sedimentation, and pollution.

The prohibition of new dams, levees, and other types of diversions would retain the waterway in the condition it was when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable scenic values would be provided by ongoing management activities described in Chapter II, particularly those actions associated with management of the Three Rivers Riparian Area of Critical Environmental Concern. That area would be recommended for withdrawal from mineral entry, and mineral leasing and material disposals would be restricted. Motorized travel would be limited to designated roads and trails in the area of critical environmental concern, and to existing roads and trails in other areas in segment 1.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable scenic values from implementation of the all suitable alternative.

Implementation of the all suitable alternative would provide protection for the outstandingly remarkable scenic values from the potential threat caused by raising the water level at Alamo Dam and the resulting inundation of the Big Sandy River from the backwaters of Alamo Lake.

A beneficial impact would result from long-term legislative protection of the outstandingly remarkable scenic values.

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Impacts on Outstandingly Remarkable Wildlife Habitat Values

The Big Sandy River study Area provides habitat for varied species. Special status species include federally listed bald eagles and peregrine falcons. Candidate Category II species include desert tortoise and Yavapai Arizona pocket mice. Native fish are not known to be present.

Vegetation has been overgrazed by cattle and burros. The seral stage of the riparian areas is well below its potential, and the water quantity and quality need to be improved.

The outstandingly remarkable wildlife habitat values would be protected by wilderness area and wild and scenic river management provisions prohibiting mineral entry, leasing, and mineral material disposals on 2,190 acres in segment 2, designated as Wild, and on 393 acres of wilderness in segment 1, designated as Scenic. In addition, motorized use either would be restricted or prohibited. These actions would prevent damage to habitat values from surface disturbance, increased human traffic, or other conflicts associated with these activities.

Under provisions of the Wild and Scenic Rivers Act, mineral development in both river segments would be conducted so as to minimize negative impacts from visual impairment, surface disturbance, sedimentation, and pollution.

The prohibition of new dams, levees, and other types of diversions would retain the waterway in the condition it was when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable wildlife habitat values would be provided by ongoing management activities described in Chapter II, particularly those actions associated with management of the Three Rivers Riparian Area of Critical Environmental Concern. That area would be recommended for withdrawal from mineral entry, and mineral leasing and material

disposals would be restricted. Motorized travel would be limited to designated roads and trails in the area of critical environmental concern and to existing roads and trails in other areas in segment 1.

Prohibitions on roads, helicopter flights, and intensive recreational activities near bald eagle nests would protect wintering and breeding eagles from disturbance by humans.

Livestock grazing would be managed to improve currently unsatisfactory range conditions and protect riparian habitat. Approximately 300 acres at the lower end of segment 2 would be closed to livestock grazing.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable wildlife habitat values from implementation of the all suitable alternative.

Implementation of the all suitable alternative would provide protection for the outstandingly remarkable wildlife habitat values from the potential threat caused by raising the water level at Alamo Dam and the resulting inundation of the Big Sandy River from the backwaters of Alamo Lake.

A beneficial impact would result from long-term legislative protection of the outstandingly remarkable values.

Impacts from Potential Inundation by Alamo Lake

A potential problem exists with the proximity of the Alamo Lake and Alamo Dam to the southern portion of the study area. While there are no plans to do so, there is a potential for the level of Alamo Lake to be raised (Wild and Scenic Rivers Suitability Assessment, Bureau of Land Management, September, 1993).

Were this to occur, inundation of the Big Sandy River by the backwaters of the Alamo Lake

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could impede backcountry travel use, adversely affect the river's free-flowing nature, and impair or destroy outstandingly remarkable scenic and wildlife habitat values.

The designation of the Arrastra Mountain Wilderness Area does not affect decisions on the water levels at the Alamo Dam.

Under the all suitable alternative special legislative protection for outstandingly remarkable values in segment 2 would provide protection for the free flowing nature of the Big Sandy River.

• Conclusion

Implementation of the all suitable alternative would have no adverse impact on the free-flowing nature and outstandingly remarkable values of the Big Sandy River. There would be a beneficial impact from long-term legislative protection that would limit the potential for inundation by Alamo Lake.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

Under the no action alternative, the entire Big Sandy River study area would be determined nonsuitable and not recommended for inclusion in the National Wild and Scenic Rivers System.

Wild and Scenic River management actions

The no action alternative determines the Big Sandy River study area to be nonsuitable. The outstandingly remarkable values identified in the eligibility evaluation would not receive special legislative protection under the Wild and Scenic Rivers Act.

Ongoing management actions

The outstandingly remarkable scenic and wildlife habitat values would be subject to the effects of actions allowable under the management of the Arrastra Mountain Wilderness Area and the Three Rivers Riparian Area of Critical

Environmental Concern.

In the 628 acres of public land not included in the Arrastra Mountain Wilderness Area or the Three Rivers Riparian Area of Critical Environmental Concern, the outstandingly remarkable values would not receive special protection.

Impacts on outstandingly remarkable scenic values.

The outstanding scenic qualities consist of canyons, mountain slopes, rolling hills, and the broad river channel. The riparian plant community, the diverse upland vegetation, and abundant wildlife complement the scenic landscape.

The outstandingly remarkable scenic values on the 4,220-acre study area would not be under the long-term legislative protection of the Wild and Scenic Rivers Act.

Under the no action alternative, the outstandingly remarkable scenic values would not have the protection of the Wild and Scenic Rivers Act from mineral entry, leasing and material disposals. They would not have the protection of the Wild and Scenic Rivers Act from mining claims restrictions to mineral estate patents. New rights-of-way would not be discouraged.

New dams, levees, and other types of diversions would not be prohibited. The free-flowing character of the river, a key aspect of its scenic values, could be affected by inundation by the backwaters of Alamo Lake.

The outstandingly remarkable scenic values would be protected by wilderness area management provisions prohibiting mineral entry, leasing, and mineral material disposals in 2,190 acres in segment 2 and 393 acres in segment 1. In addition, motorized travel would be prohibited. These actions would prevent damage to scenic values in the wilderness from surface disturbance, the presence of machinery,

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noise, or increased human traffic.

Additional protection for the outstandingly remarkable scenic values would be provided by ongoing management activities described in Chapter II, particularly those actions associated with management of the Three Rivers Riparian Area of Critical Environmental Concern. That area would be recommended for withdrawal from mineral entry, and mineral leasing and material disposals would be restricted. Motorized travel would be limited to designated roads and trails.

The outstandingly remarkable scenic values on 628 acres outside the area of critical environmental concern would not be protected by restrictions on mineral entry, leasing and material disposals. Restrictions on motorized travel would be less stringent, limiting travel to existing roads and trails.

• Conclusion

There would be no direct adverse impact to outstandingly remarkable scenic values from the implementation of the no action alternative. However, there is a potential for adverse impacts from inundation by Alamo Lake.

The outstandingly remarkable scenic values on the 628 acres outside the wilderness area and the area of critical environmental concern would not have any special protection.

The outstandingly remarkable scenic values would not benefit from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Wildlife Habitat Values

The Big Sandy River study area provides habitat for varied species. Special status species include federally listed bald eagles and peregrine falcons. Candidate Category II species include desert tortoise and Yavapai Arizona pocket mice. Native fish are not known

to be present.

Vegetation has been overgrazed by cattle and burros. The seral stage of the riparian areas is well below its potential, and the water quantity and quality need to be improved.

The outstandingly remarkable wildlife habitat values on the 4,220-acre Study Area would not be under the long-term legislative protection of the Wild and Scenic Rivers Act.

Under the no action alternative, the outstandingly remarkable values would not have the protection of the Wild and Scenic Rivers Act from mineral entry, leasing and material disposals. They would not have the protection of the Wild and Scenic Rivers Act from mining claims restrictions to mineral estate patents. New rights-of-way would not be discouraged.

New dams, levees, and other types of diversions would not be prohibited. The free-flowing character of the river, a key aspect of its wildlife habitat values, could be affected by inundation by the backwaters of Alamo Lake.

The outstandingly remarkable habitat values would be protected by wilderness area management provisions prohibiting mineral entry, leasing, and mineral material disposals in 2,190 acres in segment 2 and 393 acres in segment 1. In addition, motorized travel would be prohibited. These actions would prevent damage to habitat values in the wilderness from surface disturbance, increased human traffic, or other conflicts associated with these activities. Additional protection for the outstandingly remarkable wildlife habitat values would be provided by ongoing management activities described in Chapter II, particularly those actions associated with management of the Three Rivers Riparian Area of Critical Environmental Concern. That area would be recommended for withdrawal from mineral entry, and mineral leasing and material disposals would be restricted. Motorized travel would be limited to designated roads and trails.

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The outstandingly remarkable values on 628 acres outside the area of critical environmental concern would not be protected by restrictions on mineral entry, leasing and material disposals. Restrictions on motorized travel would be less stringent, limiting travel to existing roads and trails.

Prohibitions on roads, helicopter flights, and intensive recreational activities near bald eagle nests would protect wintering and breeding eagles from disturbance by humans.

Livestock grazing would be managed to improve currently unsatisfactory range conditions and protect riparian habitat. Approximately 300 acres at the lower end of segment 2 would be closed to livestock grazing.

• Conclusion

There would be no direct adverse impact to outstandingly remarkable wildlife habitat values from the implementation of the no action alternative. However, there is a potential for adverse impacts from inundation by Alamo Lake.

The outstandingly remarkable wildlife habitat values on the 628 acres outside the wilderness area and the area of critical environmental concern would not have any special protection.

The outstandingly remarkable values would not benefit from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts from Potential Inundation by Alamo Lake

A potential problem exists with the proximity of the Alamo Lake and Alamo Dam to the southern portion of the study area. While there are no plans to do so, there is a potential for the level of Alamo Lake to be raised (Wild and Scenic Rivers Suitability Assessment, Bureau of Land Management, September, 1993).

Were this to occur, inundation of the Big Sandy River by the backwaters of Alamo Lake could impede backcountry travel use, adversely affect the river's free-flowing nature, and impair or destroy outstandingly remarkable scenic and wildlife habitat values.

The designation of the Arrastra Mountain Wilderness Area does not affect decisions on the water levels at the Alamo Dam. Designation of the wilderness does not provide protection from inundation of the Big Sandy River study area.

• Conclusion

Implementation of the no action alternative would not provide protection from inundation by the backwaters of Alamo Lake, which could cause adverse impacts on the free-flowing nature and outstandingly remarkable values of the Big Sandy River. There would be no beneficial impact from long-term legislative protection that would limit the potential for inundation by Alamo Lake.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Big Sandy River Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Kingman Resource Management Plan (1993) that the Big Sandy River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Kingman Resource Management Plan is on file at the Kingman Resource Area Office, Kingman, Arizona, and the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Big Sandy Wild and Scenic Study Area were held in Bagdad April 5, 1993, Kingman April 6, 1993, and Phoenix on April 14, 1993. Ninety-five to 100 people attended the Bagdad meeting, 17 to 20 attended the Kingman

meetings and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

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In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shilwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermilion Resource Area.

B. Smith, Renewable Resources Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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1987 Upper Sonoran Final Wilderness Environmental Impact Statement. Arizona State Office, Phoenix.

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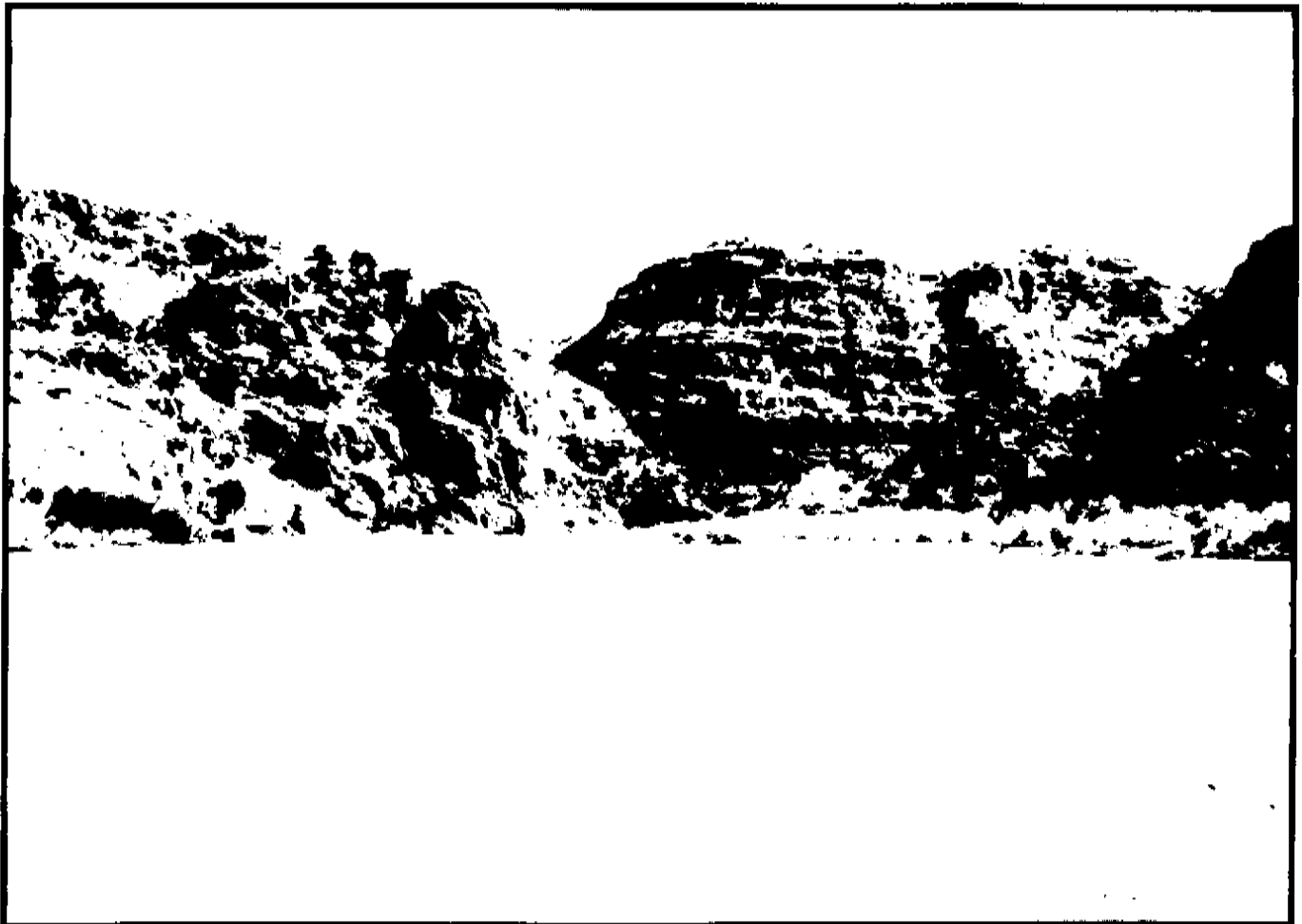
1992 Water Resources Data, Arizona Water Year 1991. U.S. Geological Survey Water-Data Report AZ-91-1. Water Resources Division, Tucson.

Bureau of Land Management, 1994

**BILL WILLIAMS RIVER
WILD AND SCENIC RIVER STUDY AREA**

**HAVASU RESOURCE AREA
YUMA DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



BILL WILLIAMS RIVER WILD AND SCENIC RIVER STUDY AREA

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BILL WILLIAMS WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Segments 1 and 2 of the Bill Williams River were identified in the Kingman Resource Management Plan (BLM 1993), and segment 3 was identified in the Yuma District Resource Management Plan Amendment (1994) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Bill Williams River to Congress for inclusion in the National Wild and Scenic Rivers System. The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The eligible Bill Williams River Wild and Scenic River Study Area is in Mohave and La Paz Counties, Arizona approximately 35 miles southeast of Lake Havasu City, Arizona. The Bill Williams River forms the boundary between the two counties in this area. The river study area is in the Havasu Resource Area of the Yuma District.

The Bill Williams River Wild and Scenic River Study Area comprises a corridor of approximately 6,037 acres, 79 percent of it public land. From Alamo Dam, at the west end of Alamo Lake, the river stretches for 37 miles and feeds into Lake Havasu. Approximately 15.9 miles of Bureau of Land Management administered lands, mixed with private and state lands, occur along 20.5 miles of the river from the dam downstream to Planet Ranch.

Planet Ranch contains approximately five miles of the river with the lower 11 miles of river flowing through the Bill Williams Unit of the Havasu National Wildlife Refuge.

The study area ranges in elevation from 1,000 feet at Alamo Dam to 670 feet downstream. The river is located within the Sonoran Desert Scrub biotic community, and is located in a transition between the Sonoran Desert and Mexican Highland section of the Basin and Range physiographic province.

The Bill Williams River has a total drainage area of 4,730 square miles above Alamo Dam. Its two major tributaries, the Santa Maria and Big Sandy Rivers, have drainage areas of 1,520 and 2,300 square miles, respectively.

In the eligibility evaluation the three segments in the study area were referred to as A, B and C. In this document the segments have been relabeled as 1, 2 and 3. This was done for consistency with the other wild and scenic river legislative environmental impact statements on Bureau of Land Management Arizona water courses.

Each of the three segments in the Bill Williams River study area has distinct characteristics and values. Segments 1 and 2 were determined to be eligible for consideration for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the Kingman Resource Management Plan (1993). Segment 1 of the Bill Williams River is 11.1 miles long. It is tentatively classified as Wild. Segment 2 is five miles long. It is tentatively classified as Scenic. Segment 3, which is five miles in length, was determined eligible in the Yuma District Resource Management Plan Amendment (1994). Segment 3 is tentatively classified as Wild.

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The river is free-flowing and has outstandingly remarkable scenic, recreational, and fish and wildlife habitat values.

The Bureau of Land Management conducted suitability determinations for each river segment during 1993.

**TABLE BWR-1
WILD AND SCENIC RIVERS STUDY AREA**

RIVER	BLM	STATE AND OTHER PUBLIC	PRIVATE	TOTAL
TOTAL MILES	15.9	2.0	1.7	19.6
PERCENT	81.0	10.0	9.0	100
TOTAL ACRES	4,650	703	684	6,037
PERCENT	78.7	10.8	10.5	100

C. INTERRELATIONSHIPS

1. Bureau of Land Management

There are 2,272 acres of segment 1 and approximately 100 acres of segment 2 in the Rawhide Mountains Wilderness. Segment 3 contains 1,850 acres in the Swansea Wilderness. Wilderness management plans would be developed for these areas beginning in 1995.

The Kingman Resource Management Plan (1993) designated the Three Rivers Riparian

Area of Critical Environmental Concern, totalling 74,139 acres, which includes the Bill Williams, Big Sandy and Santa Maria Rivers.

The Bill Williams Riparian Management Area includes the river corridor from Alamo Dam downstream to the eastern boundary of the Havasu National Wildlife Refuge. A management plan was approved in 1989.

Portions of the Alamo and Havasu Herd Management Areas are in the wild and scenic river study area. Plans for these areas were written in 1977 and 1979, respectively.

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**TABLE BWR-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE BILL WILLIAMS
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Rawhide Mountains Wilderness	2,272	46.0
Swansea Wilderness	1,850	31.0
Three Rivers Riparian Area of Critical Environmental Concern	528	9.0
Bill Williams Riparian Management Area	4,650	77.0

2. Federal Agencies

Approximately nine and a half miles of the downstream portion of the Bill Williams River flows through the U.S. Fish and Wildlife Service administered Havasu National Wildlife Refuge. An effort began in 1993 to determine suitability for the portion of the Bill Williams River that flows through the Havasu National Wildlife Refuge. Documents for this segment of the river would comply with U.S. Fish and Wildlife Service planning guidelines.

In October of 1990, a multi-agency cooperative effort was initiated to resolve issues between resource management agencies regarding the use and management of waters in the Bill Williams River system. The cooperating agencies include Arizona Game and Fish Department, Bureau of Land Management, Arizona State Parks, U.S. Fish and Wildlife Service and the U.S. Army Corps of Engineers. Planning is ongoing toward the achievement of each agency's management goals along the river.

The United States Section of the International Boundary and Water Commission is responsible for ensuring that the United States government meets the obligations incurred in the 1944 Water Treaty (TS 994; 59 Stat. 1219) and other boundary and water treaties and agreements

concluded by the United States and Mexico. The 1944 Water Treaty distributes the waters of the Rio Grande and Colorado Rivers between the two countries. This treaty provides a guaranteed annual quantity of water to Mexico.

The Alamo Lake area is managed by the U.S. Army Corps of Engineers. In 1948, Public Land Order 492 established a withdrawal on approximately 19,400 acres of both public and non-public land for the construction, operation, and maintenance of Alamo Dam and reservoir on the Bill Williams River.

3. State

In segment 2 the study area includes 703 acres of land administered by the Arizona State Land Department.

In 1969, the Corps of Engineers entered into a recreation lease with the Arizona State Parks Board for the Alamo Lake State Park. The park is one of the major recreational fishing areas in Arizona.

Under an agreement between the Corps of Engineers and the Arizona Game and Fish Department, the Department manages wildlife in the Alamo Wildlife Area, which

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incorporates lands withdrawn under Public Land Order 492. The Department became the lead agency in the Bald Eagle Nest Watch Program in 1991.

4. Private

Approximately 684 acres of private lands are in the study area.

D. SCOPING

Scoping meetings specifically highlighting the Bill Williams River study area were held in Parker March 29, 1993 and Phoenix April 14. Twenty to 25 people attended the Parker meeting and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of wild and scenic rivers designation on existing and potential land and water uses or resources in the general area of the wild and scenic river study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values. Uses or resources raised as issues specifically for this wild and scenic river study area include:

Scoping Issues

- Impacts on mineral development
- Impacts on public access
- Impacts on private property rights
- Impacts on rights-of-way
- Impacts on flow regimes
- Impacts on water rights
- Impacts on dual designation
- impacts on air quality
- Impacts on the local population and economy
- Impacts on the federal budget from this planning effort
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable recreational values
- Impacts on outstandingly remarkable fish and

wildlife habitat values

Issues Considered But Not Addressed

- Impacts on public access.

There are no paved county roads, state highways, or federal highways in the study area. The county roads leading to the river area are gravel and generally provide access to the private property in segment 2. Segments 1 and 3 are generally inaccessible except by trail.

The transportation network in the study area consists primarily of pipeline maintenance roads in the San Juan Corridor which cross the river in segment 2.

Neither alternative would affect public access to the river study area, therefore this issue will not be considered further.

- Impacts on private property rights.

There are approximately 524 acres of private land in the proposed study area, and all but 30 acres are located in segment 2.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- Impacts on rights-of-way.

The policy of the Bureau of Land Management

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regarding rights-of-way for wild rivers is as follows:

New transmission lines, including natural gas lines and water lines are discouraged unless specifically authorized by other plans, orders, or laws. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of way. Where new rights-of-way are unavoidable, locations and construction techniques shall be selected to minimize adverse effects on wild river area related values and fully evaluated during the site selection process.

This issue will not be considered further.

- Impacts on flow regimes.

The perennial/regulated flow regimes of the Bill Williams River would not be affected by wild and scenic river designation. When granted, water rights would be junior to existing rights.

Therefore, this issue will not be considered further.

- Impacts on water rights.

Designation as a wild, scenic, or recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it

would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

Federal reserved rights were created for those portions of the river in the Rawhide Mountains and Swansea Wilderness Areas by the Arizona Desert Wilderness Act of 1990. These rights are being quantified and notification will be submitted to the state.

The Bureau of Land Management conducted an intensive instream flow assessment and filed an application for an instream flow (No. 33-94245) with the state in 1988 for wildlife, fisheries and recreational values. This application included all the public land river reaches below Alamo Dam.

This issue will not be considered further.

- Impacts on dual designation.

Segment 2 is in the Three Rivers Riparian Area of Critical Environmental Concern. All of segment 1 is in the Rawhide Mountains Wilderness and all of segment 3 is in the Swansea Wilderness. In this case, dual designation refers to a wild and scenic river designation being added to the existing management categories. There would be no environmental impact from this because only the more stringent action would apply.

This issue will not be considered further.

- impacts on air quality.

The implementation of the management actions associated with any of the alternatives would not have impacts on air quality in the Bill Williams River study area because there would be no surface disturbance or development that would release particulate matter.

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This issue will not be discussed further.

- Impacts on the local population and economy.

Employment and income would not be affected by implementation of the alternatives. No existing minerals operations, exploration, or leasing would be affected.

Benefits to the local economy from increased tourism as a result of Congressional action on designation of the Bill Williams River as a wild and scenic river cannot be estimated accurately, but are expected to be minimal. Only a slight increase in tourism is anticipated from designation because of the area's general remoteness from large urban centers.

This issue will not be considered further.

- Impacts on the federal budget from this planning effort

The Wild and Scenic Rivers Act requires that all

eligible rivers be considered for inclusion in the National Wild and Scenic Rivers System.

This issue will not be discussed further.

The areas of major concern for the Bill Williams River study area may be grouped into two categories. One of these supports recommendations to Congress for inclusion of the subject river segments as identified in the eligibility assessment into the National Wild and Scenic River System. Another includes a preference to retain present conditions. These categories of issues are treated as alternatives in this document.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft **environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

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II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Bill Williams River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are analyzed:

Recommended alternative (all suitable)
No action (not suitable)

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines that approximately 20.5 miles of the Bill Williams River are suitable and recommends that they be designated for inclusion in the National Wild and Scenic Rivers System.

It was determined in the suitability assessment process that the lengths of the three segments should be adjusted slightly to facilitate management of the study area. Segment 1 (2,314 acres) was shortened to 8.3 miles in length to exclude all private land and is recommended as Wild. Segment 2 (486 acres of public land) is now 5.1 miles in length and includes 494 private acres and 627 acres of state lands, and is recommended as Scenic. Segment 3 (1,850 acres of public land) is now 6.2 miles and includes 30 acres of private land, 76 acres of state lands, and is recommended as Wild.

Wild and Scenic River Management Actions

Wild and scenic river designation would require certain management actions be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur as a result of designation. In the event that wild and scenic river management actions overlap ongoing management actions, the more stringent would be applied.

- Construction of new roads, trails, or other provisions for overland motorized travel would be prohibited in wild segments 1 and 3 (4,164 acres).
- Water quality would be monitored in order to meet federal criteria or federally approved state standards in the entire study area, according to the Wild and Scenic Rivers Act.
- Patents would be restricted to the mineral estate on 486 acres of the study area not in wilderness.
- Instream flow would be monitored to establish the minimum flow necessary to protect the outstandingly remarkable values.
- New rights-of-way would be discouraged on 486 acres of the study area not in wilderness.
- The construction of dams, levees, hydropower facilities, or major types of diversions would be prohibited on up to 15.9 riparian miles.

Ongoing Management Actions

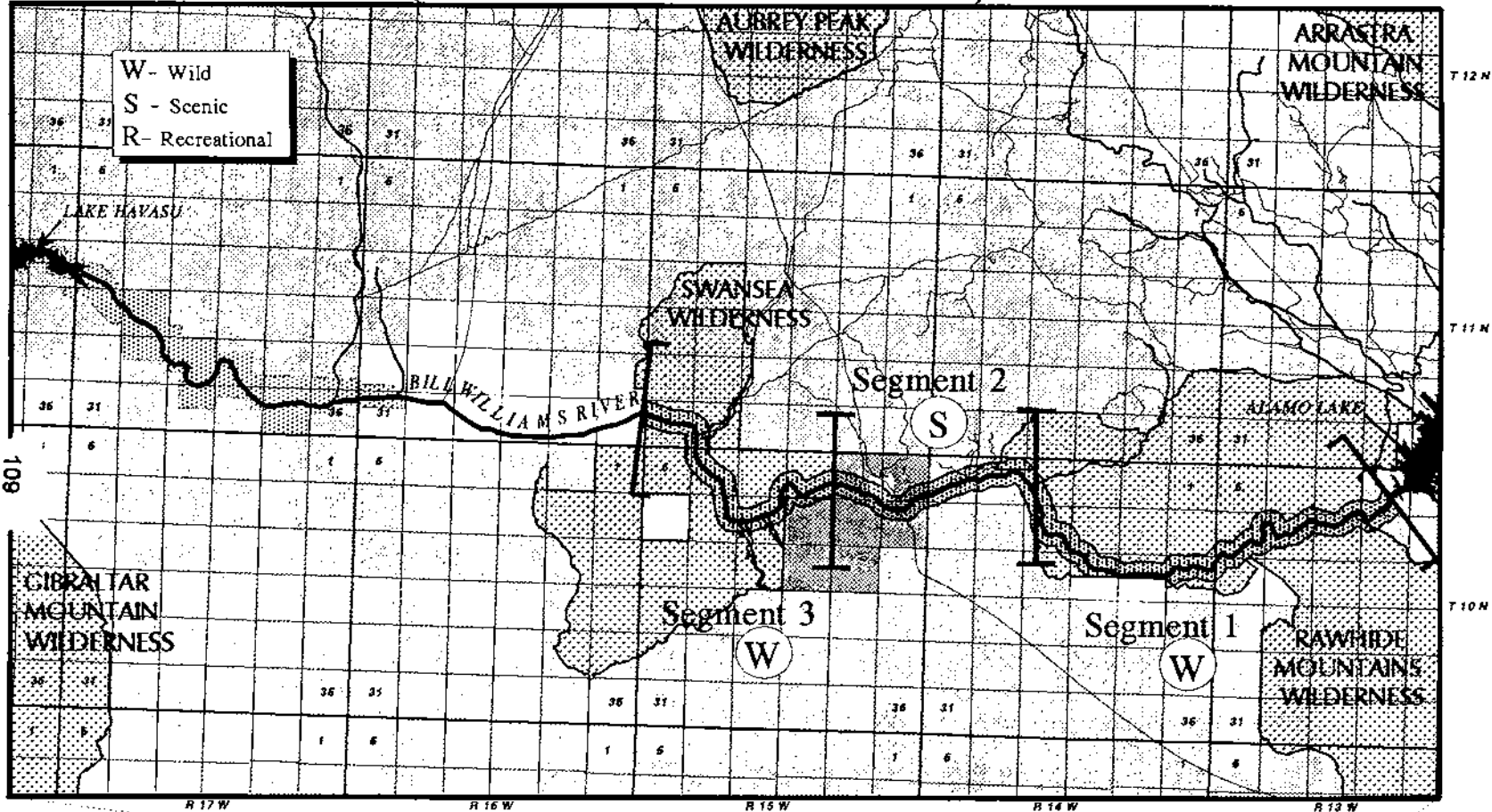
Ongoing management actions in the Bill Williams River study area would continue regardless of wild and scenic river designation. The following are selected management actions required by the

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Wilderness Act, a portion of the Kingman Resource Management Plan, the Three Rivers Riparian Area of Critical Environmental Concern, the Yuma District Resource Management Plan, and the Bill Williams Riparian Management Area Plan.

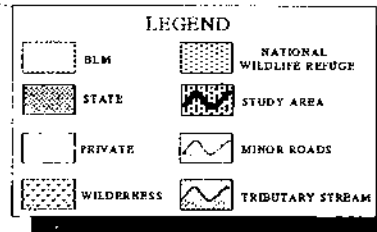
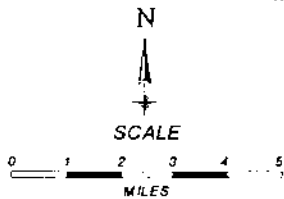
- The 2,314 acres in segment 1 in the Rawhide Mountains Wilderness, and the 1,850 acres in segment 3 in the Swansea Wilderness are withdrawn from mineral entry and mineral leasing, and are closed to mineral material disposal.
- The riparian zone is recommended for withdrawal from mineral entry on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- Mineral leasing with no surface occupancy would be allowed in the riparian zone on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- Bureau of Land Management approval for plans of operations would be required for all mineral exploration and development activities, above the level of casual use, outside the riparian zone on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- Mineral material disposal would be prohibited in the riparian zone on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- New mining claims and mineral leases would not be allowed in the riparian zone in segment 2 (Scenic).
- New major rights-of-way would be confined to existing corridors on 486 acres in segment 2.
- The Bureau of Land Management would acquire the 524 acres of private land and the 703 acres of state land on a willing seller-willing buyer or exchange basis in the Bill Williams River study area.
- Road development in segment 2 would be prohibited on 486 acres in 1/2 mile of bald eagle nests.
- Motorized travel is prohibited in the wilderness portions of segment 1 (2,314 acres) and segment 3 (1,850 acres).
- Off-highway vehicle use in riparian zones would be limited to designated roads and trails on 486 acres of segment 2 (Scenic).
- The development of campgrounds would be restricted to areas outside the riparian zone and the 100-year floodplain on 486 acres in segment 2.
- The area within 1/2 mile of a falcon nest would be closed to any surface disturbance or intensive recreational activities, such as group camping, during the breeding season (March 1 to June 15) on 486 acres in segment 2.
- The portions of the study area in wilderness areas (4,164 acres) would be managed as Visual Resource Management Class I. Management activities would be limited to those which preserve the characteristic landscape.
- The non-wilderness portions of the study area (486 acres) would be managed as a Visual Resource Management Class II area. Management activities would be limited to those which would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.
- Helicopter flights in segment 2 would be prohibited within 1/2 mile of active bald eagle nests during the breeding season on 486 acres.
- Except for salvage operations, the removal of native plants would be prohibited on 486 acres in segment 2.

BILL WILLIAMS RIVER (Recommended Alternative)



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DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
YUMA DISTRICT
HAVASU RESOURCE AREA

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LOCATION DIAGRAM

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- A systematic program would be developed for removal of salt cedar on up to 500 acres in segment 2.
- Up to 200 cottonwood and willow poles would be planted on up to 100 acres in segment 3.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.
- A cultural resources field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Up to five new upland water sources for use by livestock would be developed to improve riparian areas.
- Up to five miles of fences, including enclosures, would be constructed to improve riparian areas, according to the Bill Williams Riparian Management Area Plan.
- Livestock would be removed when utilization exceeds 70 percent on cottonwood and willow seedlings and/or utilization of key herbaceous exceeds 50 percent.
- Wild burro populations would be monitored and excess numbers would be removed.

C. NO ACTION ALTERNATIVE

The no action alternative determines that the Bill Williams River study area is not suitable and does not recommend it for inclusion in the National Wild and Scenic Rivers System. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings and place the river area under applicable multiple-use management prescriptions.

Under the no action alternative, management activities for the study area would continue to comply with the Wilderness Act, a portion of the Kingman Resource Management Plan, the Three Rivers Riparian Area of Environmental Concern, the Yuma District Resource Management Plan, and the Bill Williams Riparian Management Area Plan.

If the no action alternative is selected and implemented, current resource management would continue. The following summarizes management actions for selected resources.

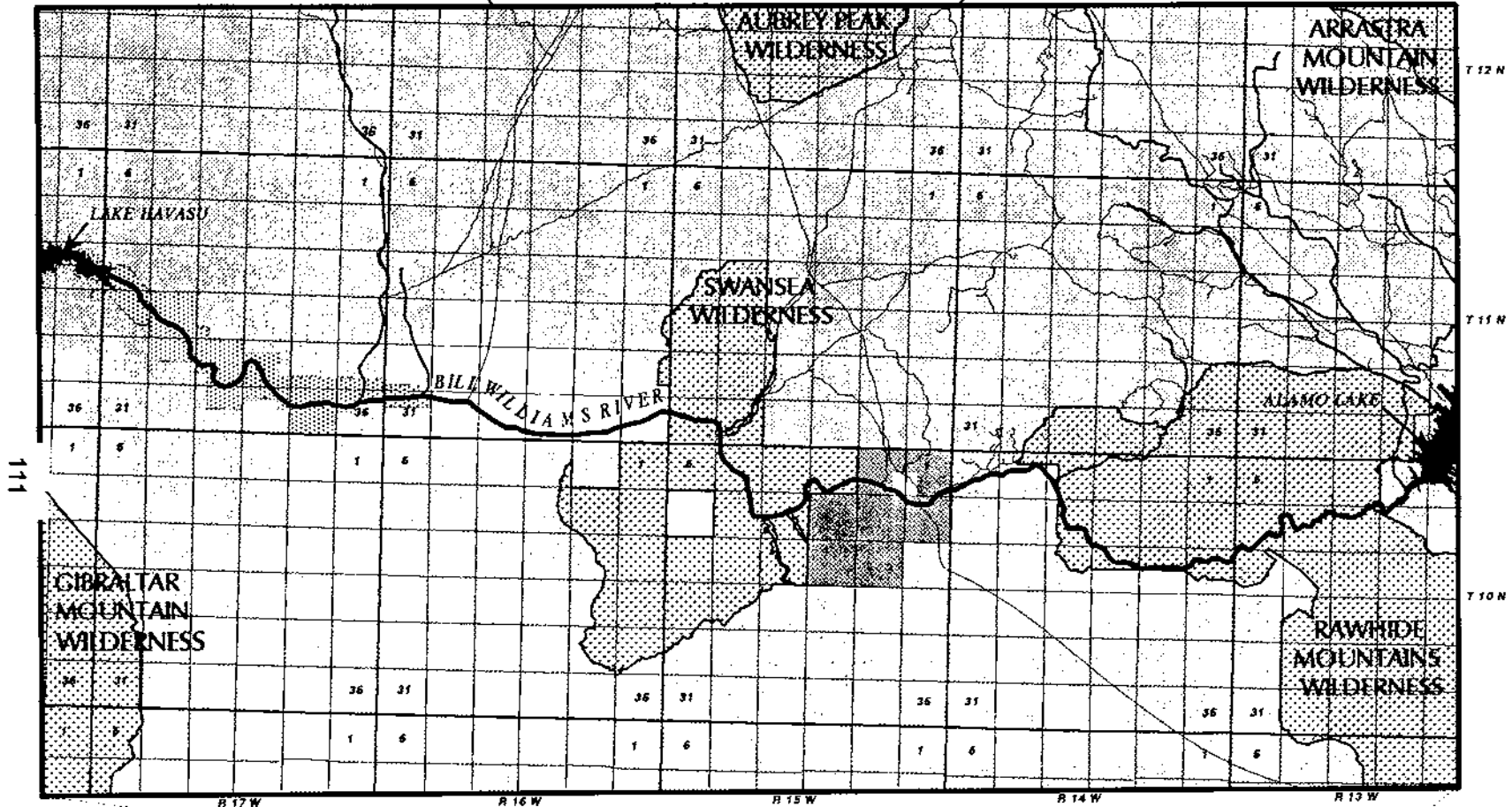
Wild and Scenic River Management Actions

No wild and scenic river management actions would occur in the implementation of the no action alternative.

Ongoing Management Actions

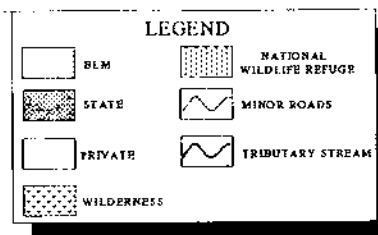
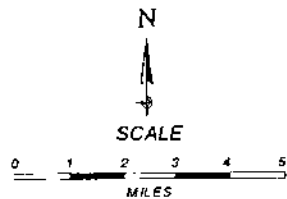
Other existing management actions on the 4,650-acre study area would occur in accordance with the Wilderness Act, a portion of the Kingman Resource Management Plan, the Three Rivers Riparian Area of Environmental Concern, the Yuma District Resource Management Plan, and the Bill Williams Riparian Management Area Plan. These are the same as the ongoing management actions listed under the recommended alternative.

BILL WILLIAMS RIVER (No Action Alternative)



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- The 2,314 acres within segment 1 in the Rawhide Mountains Wilderness, and the 1,850 acres in segment 3 in the Swansea Wilderness are withdrawn from mineral entry and mineral leasing, and are closed to mineral material.
- The riparian zone is recommended for withdrawal from mineral entry on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- Mineral leasing with no surface occupancy would be allowed in the riparian zone on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- Bureau of Land Management approval for plans of operation would be required for all mineral exploration and development activities, above the level of casual use, outside the riparian zone on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- Mineral material disposal would be prohibited in the riparian zone on 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2.
- New mining claims and mineral leases would not be allowed in the riparian zone in segment 2.
- New major rights-of-way would be confined to existing corridors on 486 acres in segments 2.
- The Bureau of Land Management would acquire the 524 acres of private land and the 703 acres of state land on a willing seller-willing buyer or exchange basis in the Bill Williams River study area.
- Road development in segment 2 would be prohibited within 1/2 mile of a bald eagle nest on 486 acres.
- Motorized travel is prohibited in the wilderness portions of segment 1 (2,314 acres) and segment 3 (1,850 acres).
- Off-highway vehicle use in riparian zones would be limited to designated roads and trails on 486 acres of segment 2.
- The development of campgrounds would be restricted to areas outside riparian zones and the 100-year floodplain on 486 acres in segment 2.
- The area within 1/2 mile of a falcon nest would be closed to any surface disturbance or intensive recreational activities, such as group camping, during the breeding season from March 1 to June 15 on 486 acres in segment 2.
- The portions of the study area in wilderness areas (4,164 acres) would be managed as Visual Resource Management Class I. Management activities would be limited to those which preserve the characteristic landscape.
- The non wilderness portions of the river study area (486 acres) would be managed as a Visual Resource Management Class II area. Management activities would be limited to those which would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.
- Helicopter flights in segment 2 would be prohibited within 1/2 mile of active bald eagle nests during the breeding season on 486 acres.
- Except for salvage operations, the removal of native plants would be prohibited on 486 acres in segment 2.
- A systematic program would be developed for removal of salt cedar on up to 500 acres in segment 2.
- Up to 200 cottonwood and willow poles would be planted on up to 100 acres in segment 3.

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- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.
- In most cases, a cultural resources field inventory of the potentially affected area would be complete.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Up to five new upland water sources for use by livestock would be developed to improve riparian areas.
- Up to five miles of fences, including exclosures, would be constructed to improve riparian areas, according to the Bill Williams Riparian Management Area Plan.
- Livestock would be removed when utilization exceeds 70 percent on cottonwood and willow seedlings and/or utilization of key herbaceous species exceeds 50 percent.

- Wild burro populations would be monitored and excess numbers would be removed.

D. ALTERNATIVES CONSIDERED BUT REJECTED

The Arizona Rivers Coalition encouraged consideration of a scenic suitability determination for the entire 21-mile length of the Bill Williams River. This alternative was considered but rejected because through the eligibility and suitability study process, and based on existing river characteristics, the Bureau of Land Management determined that segments 1 and 3 met the Wild criteria.

The Bureau of Land Management also considered and eliminated from further consideration the all scenic designation in its eligibility study.

Another alternative suggested for consideration by the Bureau of Land Management would have eliminated private and state lands from the study area. This alternative was considered but rejected because the Three Rivers Riparian Area of Environmental Concern and the Bill Williams Riparian Management Area Plan contain a management action that would have the Bureau of Land Management acquire all private and state lands in the study area. No other alternatives were suggested by the public or other agencies.

No other alternatives were formulated by the Bureau of Land Management.

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**TABLE BWR-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative (all suitable)	No action (not suitable)
Impacts on Outstandingly Remarkable Scenic Values	Possible minor adverse impacts from a small mining operation; long-term protection under the Wilderness Act already in place	Possible minor adverse impacts from a small mining operation; long-term protection under the Wilderness Act already in place
Impacts on Outstandingly Remarkable Recreation Values	No adverse impacts; long-term protection under the Wilderness Act already in place	No adverse impacts; long-term protection under the Wilderness Act already in place
Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values	Possible minor adverse impacts from a small mining operation; new long-term legislative protection under the Wild and Scenic Rivers Act on 486 acres	Possible minor adverse impacts from a small mining operation; no long-term legislative protection on 486 acres
Impacts on Mineral Development	No adverse impacts	No adverse impacts

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III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Bill Williams River study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Yuma Resource Management Plan Amendment (1994), the Bill Williams Riparian Management Area Plan (1989), and the Bill Williams River wild and scenic suitability determination assessment (1993). These documents are available for public review at the Arizona State Office, Yuma District Offices and Havasu Resource Area office.

The following summarizes the affected resources.

A. OUTSTANDINGLY REMARKABLE VALUES

Scenic values were identified as outstandingly remarkable in segments 1 and 3. The river gorge in these segments is narrow with numerous deep side canyons. The presence of perennial water and riparian vegetation creates a dramatic oasis which enhances the overall scenic quality of the area. The scenic quality of segments 1 and 3 are rated as Class A as defined in the Bureau of Land Management Visual Resource Inventory Handbook (H-8410-1).

The Bill Williams River also contains outstandingly remarkable recreational values. Segments 1 and 3 provide primitive, unconfined recreation such as hunting, fishing, and bird watching. Backpacking and hiking opportunities exist along the river and its many side canyons. Segment 1 is in the Rawhide Mountains Wilderness and segment 3 lies in the Swansea Wilderness. Each area has the potential to be a popular destination for visitors.

These segments offer exceptional opportunities for solitude and the sense of a wilderness experience. When the river is flowing, opportunities exist for non-motorized float trips using rafts, canoes and kayaks.

There are no developed recreation sites along the river. The development of recreation facilities outside of the study area is planned for Planet and Lincoln Ranches should the Bureau of Land Management acquire these properties.

Segment 2 possesses outstandingly remarkable fish and wildlife habitat values. High primary productivity in both segments has resulted in an abundance of non-game birds, amphibians, reptiles, mammals, and insects.

The Bill Williams River drainage contains the fourth highest diversity of raptors found in Arizona. The riparian areas provide wintering and breeding habitat for bald eagles (Haliaeetus leucocephalus), habitat for breeding peregrine falcons (Falco peregrinus), southwestern willow flycatchers (Empidonax trillii extimus) and many other special status species. These particular areas could significantly contribute to bald eagles recolonizing the Colorado River.

In general, the study area provides habitat for big game species such as mule deer (Odocoileus hemionus), desert bighorn sheep (Ovis canadensis nelsonii), javelina (Pecari tajacu) and mountain lion (Felis concolor). Small game species in the area include cottontail rabbit (Sylvilagus nuttallii), Gambel's quail (Lophortyx gambelii), mourning dove (Zenaidura macroura), snipe (Capella gallinago), and several species of ducks. Approximately 250 species of birds, 48 mammals, and 34 reptiles and amphibians are known or suspected to occur along the river.

Fish occur throughout the study area wherever there is flowing water. The river is host to green sunfish (Lepomis cyanellus), red shiner

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(Notropis lutrensis), mosquitofish (Gambusia spp.), carp (Cyprinus carpio), channel catfish (Ictalurus punctatus) and bullhead (Ictalurus spp.). Native species that may be present or are historical are longfin dace (Agosia chrysogaster), desert sucker (Catostomus clarki) and roundtail chub (Gila robusta).

B. MINERALS

According to U.S. Geological Survey Bulletin 1704-C (USGS 1990), the river study area contains no identified metallic mineral resources. The area also lacks the potential for oil and gas resources.

Sand and gravel found in the area possess no unique characteristics that would make it more desirable than similar deposits outside the study area.

C. LANDS

There are no paved county roads, state highways, or federal highways in the study area. The county roads leading to the river area are gravel and generally provide access to the private property in segment 2. Segments 1 and 3 are generally inaccessible except by trail.

The San Juan Corridor is the only corridor in the study area. The transportation network in the study area consists primarily of pipeline maintenance roads in the San Juan Corridor which cross the river in segment 2. El Paso Natural Gas Company holds a 50-foot right-of-way in the corridor where the pipeline is both buried and above ground. As part of their right-of-way, El Paso Natural Gas Company was granted 20 acres for the bridge crossing at the river in segment 2. The maintenance road is graded and in good condition. There are no other existing rights-of-way or leases.

Electric Lightwave, Inc. has proposed a right-of-way through this corridor for a buried and above-ground fiber optic cable. Electric Lightwave has proposed to bore under the river

approximately 1/2 mile downstream of the El Paso pipeline and in the general vicinity of El Paso's maintenance road river crossing.

There are approximately 684 acres of private land in the study area; all but 30 acres are located in segment 2. Most of the private parcels are not presently used commercially for agriculture or grazing; however, 30 acres in segment 3 is cultivated with alfalfa.

The Bill Williams Riparian Management Area Plan recommended the acquisition of private property from willing sellers and the exchange for state lands to protect the riparian habitat and fish and wildlife values.

D. RIPARIAN VEGETATION

Vegetation south of the river is primarily creosote bush (Larrea tridentata) in association with staghorn cholla (Opuntia acanthocarpa), barrel cactus (Ferocactus spp.) and paloverde (Cercidium floridum). The desert shrub community north of the river is dominated by creosote bush, in association with paloverde, smoketree (Dalea spinosa), barrel cactus, brittlebush (Encelia farinosa), catclaw acacia (Acacia greggii), beavertail cactus (Opuntia basilaris) and ocotillo (Fouquieria splendens).

The Alamo Lake complex, composed of the Big Sandy, Santa Maria and Bill Williams Rivers, is one of the most important desert riparian ecosystems in the state of Arizona (BLM 1990). It has been estimated that between 1854 and 1978 approximately 70 percent of the river's riparian vegetation was destroyed.

Natural events (especially the high flows of 1993) and human activity have contributed to the present degraded system. The basic plant community consists of salt cedar (Tamarisk pentandra), willows (Salix spp.), mesquite

(Prosopis juliflora) and smoketree (Dalea spinosa).

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Prior to the high flows in the spring of 1993, there were approximately 440 acres of riparian habitat in segment 3.

E. CULTURAL RESOURCES

Previous research and inventory in the Bill Williams River area between Alamo Dam and Planet Ranch are limited. The historic floodplain of the river, with few exceptions, is unlikely to have any cultural properties that have not been damaged or destroyed by the river. However, the presence of the river would have been an important focus for any group of humans occupying this arid environment and, with the right topographical conditions, the corridor adjacent to the river preserves the evidence of previous cultures.

Prehistoric archaeological sites have been recorded that suggest a use of the river corridor as early as the Archaic period, 6,000 years B.C. Archaeological and ethnographic information indicate use of the Bill Williams River and its drainage area by the Patayan Culture, a general term that encompasses a large area of western Arizona, and later by the Hualapai, Yavapai and Colorado River groups, the Mohave and Chemehuevi, continuing into historic times.

The study area would have been predominantly within the territory of the Mohave. Prehistoric and protohistoric site types include ritual use represented by geoglyphs (rock alignments and intaglios), temporary habitations (rock shelters, rock rings, sleeping circles with associated artifact scatters and hearths); resource exploitation (quarries, chipping stations); food procurement, processing and storage (bedrock grinding, pot busts, roasting pits, caches); and travel (trails, cairns and rock piles).

The Bill Williams River provided an east-west corridor for aboriginal travelers as well as later historic exploration. The 1604 Onate expedition was the earliest documented use of this route by Europeans. The main historic use has been ranching and mining. Water control features,

cabins and milling structures remain from those early economic pursuits.

F. WATER RESOURCES

Alamo Dam began to regulate flows in 1969. Annual flows below the dam averaged 153 cubic feet per second during the water years of 1970-1986. Flows ranged from a low of 2.05 cubic feet per second in 1975 to a high of 3,900 cubic feet per second in 1980. The high flow rate in the spring of 1993 was gaged at 7,000 cubic feet per second.

Federal reserved water rights were created for those portions of the river in the Rawhide Mountains and Swansea Wilderness Areas by the Arizona Desert Wilderness Act of 1990. These rights are being quantified and notification will be submitted to the state.

The Bureau of Land Management conducted an intensive instream flow assessment and filed an application for an instream flow (No. 33-94245) with the state in 1988 for wildlife, fisheries and recreational values. This application included all the public land river reaches below Alamo Dam.

G. LIVESTOCK GRAZING AND WILD BURROS

The Bill Williams River study area crosses portions of the Planet and Primrose grazing allotments and forms the boundary between the Alamo and Alamo Crossing Allotments. Livestock use in this area is authorized according to the special rule for ephemeral range. Livestock use is unrestricted between unfenced private, state, and federal lands in the area.

The Planet Allotment has had no licensed use since 1983 and Primrose Allotment was last licensed in 1988.

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The Bill Williams River study area contains portions of the Alamo and Havasu Herd Management Areas. A census conducted by the Bureau of Land Management in 1991 from

Alamo Dam to the Planet Ranch, including at least five miles north and south of the river, estimated a population of 153 burros. The river provides a crucial source of water for the burros.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Bill Williams River study area are analyzed.

Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act for any Congressionally designated wild and scenic river.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine. Large mining operations would be those involving more than five acres.

No oil or gas development is anticipated in any of the wild and scenic river study areas. Any exceptions to this would be subject to approval in compliance with the Yuma District oil and gas leasing requirements.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative determines segment 1 (2,314 public acres and 8.3 miles) as suitable for designation with a Wild classification; segment 2 (486 public acres and 5.1 miles) as suitable for designation with a Scenic classification; and segment 3 (1,850

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public acres and 6.2 miles) as suitable for designation with a Wild classification. Wild and scenic river management actions would provide long-term legislative protection to the outstandingly remarkable scenic, recreational and fish and wildlife habitat values identified for the area in the eligibility evaluation.

Impacts on Outstandingly Remarkable Scenic Values

Scenic values were identified as outstandingly remarkable in segments 1 and 3. A narrow river gorge with numerous deep side canyons, perennial water and riparian vegetation create an outstandingly remarkable panorama in the desert southwest.

Under the recommended alternative, wild and scenic river management actions would occur. One of the actions would restrict patents to the mineral estate on 486 acres of the study area not in wilderness. This would preserve the surface in federal ownership and protect the outstandingly remarkable scenic values.

Other wild and scenic river management actions would prohibit new roads, trails, or other provisions for overland motorized travel and would protect the outstandingly remarkable scenic values in wild segments 1 and 3 (4,164 acres).

Dams, levees, hydropower facilities, or major types of diversions would be prohibited on up to 15.9 riparian miles of the Bill Williams River study area. This action would preserve the existing conditions and the outstandingly remarkable scenic values in the study area.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, motorized travel is prohibited in the wilderness portions of segment 1 (2,314 acres) and segment 3 (1,850 acres). Off-highway vehicle use in riparian zones would be limited to designated roads and trails on 486

acres of segment 2 (scenic). The development of campgrounds would be restricted to areas outside riparian zones and the 100-year floodplain on 486 acres in segment 2. These actions would provide administrative protection for the outstandingly remarkable scenic values.

The lands in the study area outside the riparian zone in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), it is reasonable to expect that some development will occur in the next 20 years. The mining scenario applies here.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values. Reclamation, required by the mining laws, would provide some mitigation.

• Conclusion

The outstandingly remarkable scenic values in wilderness already receive long-term legislative protection under the Wilderness Act.

Mining activities could have minor adverse impacts on the study area's outstandingly remarkable scenic values from one small mining operation.

Impacts on Outstandingly Remarkable Recreational Values

Segment 1 (Rawhide Wilderness) and segment 3 (Swansea Wilderness) provide primitive,

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unconfined recreation. Backpacking and hiking opportunities exist along the river and its many side canyons. Each area has the potential to be a popular destination for visitors. These segments offer exceptional opportunities for solitude and the sense of a wilderness experience.

There are no developed recreation sites along the river. The development of recreation facilities outside of the study area is planned for Planet and Lincoln Ranches should the Bureau of Land Management acquire these properties.

Under implementation of the recommended alternative, wild and scenic river management actions would occur. One of the actions would restrict mining claims to mineral estate patents on 486 acres of the study area not in wilderness. This would preserve the federal surface and protect the outstandingly remarkable recreation values through protected public access.

Other wild and scenic river management actions would prohibiting new roads, trails, or other overland motorized travel in wild segments 1 and 3 (4,164 acres).

Dams, levees, hydropower facilities, or major types of diversions would be prohibited on up to 15.9 riparian miles of the Bill Williams River study area. This action would preserve the scenic character of the corridor. The outstandingly remarkable recreation values would benefit from this protection.

Additional protection for the outstandingly remarkable recreational values would be supplied by the ongoing management activities described in Chapter II. For example, motorized travel is prohibited in the wilderness portions of segment 1 (2,314 acres) and 1,850 acres in segment 3. Off-highway vehicle use in riparian zones would be limited to designated roads and trails on 486 acres of segment 2 (scenic). The development of campgrounds would be restricted to areas outside riparian

zones and the 100-year floodplain on 486 acres in segment 2. These actions would provide administrative protection for the outstandingly remarkable recreational values.

The lands in the study area outside the riparian zone in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), it is reasonable to expect some development in the next 20 years. The mining scenario applies here.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable recreational values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the recreational values. Reclamation, required by the mining laws, would provide some mitigation.

• Conclusion

The outstandingly remarkable recreational values in wilderness already receive long-term legislative protection under the Wilderness Act.

Mining activities could have minor adverse impacts on the study area's outstandingly remarkable recreational values from one small mining operation.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Segment 2 possesses outstandingly remarkable fish and wildlife values. The Bill Williams River drainage contains the fourth highest diversity of raptors found in Arizona. The riparian areas

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provide wintering and breeding habitat for bald eagles, suspected habitat for breeding peregrine falcons and many other special status species.

Under the recommended alternative, wild and scenic river management actions would occur. One of the actions would restrict mining claims to mineral estate patents on 486 acres in segment 2. This would preserve the federal surface and protect the outstandingly remarkable fish and wildlife habitat values.

Dams, levees, hydropower facilities, or major types of diversions would be prohibited on up to 15.9 riparian miles of the Bill Williams River study area. This action would preserve the conditions that existed when the outstandingly remarkable fish and wildlife habitat values were identified. The outstandingly remarkable fish and wildlife habitat values would benefit from this protection by eliminating habitat loss from these developments.

Discouraging new rights-of-way would help protect the outstandingly remarkable fish and wildlife habitat values. While discouraging new rights-of-way is not the same as prohibiting them, it can guide applicants to consider alternate routes or the use of existing corridors.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, except for salvage operations, the removal of native plants would be prohibited on 486 acres in segment 2. A systematic program would be developed for removal of salt cedar on up to 500 acres in segment 2. Up to 200 cottonwood and willow poles would be planted on up to 100 acres in segment 3.

Up to five new upland water sources for use by livestock would be developed to improve riparian areas. Up to five miles of fences, including exclosures, would be constructed to improve riparian areas, according to the Bill Williams Riparian Management Area Plan. Road

development in segment 2 would be prohibited on 486 acres within 1/2 mile of bald eagle nests. Helicopter flights in segment 2 would be prohibited within 1/2 mile of active bald eagle nests during the breeding season on 486 acres. These actions would enhance riparian communities, and improve habitat for wildlife such as bald eagles, southwestern willow flycatcher and mule deer.

These actions would provide administrative protection to the outstandingly remarkable fish and wildlife habitat values.

The lands in the study area outside the riparian zone in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), it is reasonable to expect some development in the next 20 years. The mining scenario applies here.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable fish and wildlife habitat values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the recreational values. Reclamation, required by the mining laws, would provide some mitigation.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Mining activities could have minor adverse impacts on the study area's outstandingly

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remarkable fish and wildlife habitat values from one small mining operation.

Impacts on Mineral Development

According to U.S. Geological Survey Bulletin 1704-C (USGS 1990), the wild and scenic river study area contains no identified metallic mineral resources. The area also lacks the potential for oil and gas resources.

Sand and gravel deposits found in the area possess no unique characteristics that would make them more desirable than similar deposits outside the study area.

Nearly 2,300 acres in segment 1 are in the Rawhide Mountains Wilderness and 1,850 acres in segment 3 are in the Swansea Wilderness. These areas are withdrawn from mineral entry and mineral leasing, and are closed to mineral material disposal in accordance with the Wilderness Act.

In the 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2, the riparian zone is recommended for withdrawal from mineral entry. On 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2, mineral leasing would be allowed in the riparian zone with no surface occupancy.

Within the 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2, Bureau of Land Management approval for plans of operations would be required for all mineral exploration and development activities, above the level of casual use, outside the riparian zone. On the 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2, mineral material disposal would be prohibited.

The lands in the study area outside the riparian area in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability

assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), consideration of the mining scenario is appropriate.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

• Conclusion

Implementation of the recommended alternative would not have an adverse impact on minerals development because the mineral potential is so low.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Bill Williams River study area. Over most of the area, the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Rawhide Mountain and Swansea Wilderness Areas.

Therefore, the cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of the 4,200 acre

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extent of these wilderness areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative, mineral entry would be prohibited on all except 486 acres in segment 2, and recreational activities would be subject to the Rawhide Mountain and Swansea wilderness management plans.

However, Congress can rescind the wilderness designation as well as the wild and scenic river designation,

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from wilderness management plans.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

Scenic, recreational, and fish and wildlife habitat have been identified as outstandingly remarkable values in the Bill Williams River study area.

The no action alternative determines as not suitable and does not recommend the Bill Williams River study area for designation. The outstandingly remarkable values would not receive long-term legislative protection under the Wild and Scenic Rivers Act.

The outstandingly remarkable values would be subject to the effects of actions allowable under the Rawhide Mountain and Swansea Wilderness Area prescriptions and the Three Rivers Riparian Area of Critical Environmental Concern.

Impacts on Outstandingly Remarkable Scenic Values

Scenic values were identified as outstandingly remarkable in segments 1 and 3. A narrow river gorge with numerous deep side canyons, perennial water and riparian vegetation create an outstandingly remarkable panorama in the desert southwest.

Protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, motorized travel is prohibited in the wilderness portions of segment 1 (2,314 acres) and segment 3 (1,850 acres). Off-highway vehicle use in riparian zones would be limited to designated roads and trails on 486 acres of segment 2 (scenic). The development of campgrounds would be restricted to areas outside riparian zones and the 100-year floodplain on 486 acres in segment 2. These actions would provide administrative protection for the outstandingly remarkable scenic values.

The lands in the study area outside the riparian zone in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), it is reasonable to expect some development in the next 20 years. The mining scenario applies here.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

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The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values. Reclamation, required by the mining laws, would provide some mitigation.

• Conclusion

The outstandingly remarkable scenic values in the study area in wilderness already receive protection under the Wilderness Act.

Implementation of the no action alternative could have minor adverse impacts on the outstandingly remarkable scenic values from one small mining operation.

Impacts on Outstandingly Remarkable Recreational Values

Segment 1 (Rawhide Wilderness) and segment 3 (Swansea Wilderness) provide primitive, unconfined recreation. Backpacking and hiking opportunities exist along the river and its many side canyons. Each area has the potential to be a popular destination for visitors. These segments offer exceptional opportunities for solitude and the sense of a wilderness experience.

There are no developed recreation sites along the river. The development of recreation facilities outside of the study area is planned for Planet and Lincoln Ranches should the Bureau of Land Management acquire these properties.

Protection for the outstandingly remarkable recreational values would be supplied by the ongoing management activities described in Chapter II. For example, motorized travel is prohibited in the wilderness portions of segment 1 (2,272 acres), 100 acres in segment 2, and 1,850 acres in segment 3. Off-highway vehicle use in riparian zones would be limited to designated roads and trails on 486 acres of segment 2 (scenic). The development of campgrounds would be restricted to areas

outside riparian zones and the 100-year floodplain on 486 acres in segment 2. These actions would provide administrative protection for the outstandingly remarkable recreational values.

The lands in the study area in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws.

Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), it is reasonable to expect some development in the next 20 years. The mining scenario applies here.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable recreational values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values. Reclamation, required by the mining laws, would provide some mitigation.

• Conclusion

The outstandingly remarkable recreational values in the study area in wilderness already receive protection under the Wilderness Act.

Implementation of the no action alternative could have minor adverse impacts on the study area's outstandingly remarkable recreational values in segment 2 from one small mining operation.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Segment 2 possesses outstandingly remarkable fish and wildlife habitat values. The Bill Williams

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River drainage contains the fourth highest diversity of raptors found in Arizona. The riparian areas provide wintering and breeding habitat for bald eagles, suspected habitat for breeding peregrine falcons and many other special status species.

Protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, except for salvage operations, the removal of native plants would be prohibited on 486 acres in segment 2. A systematic program would be developed for removal of salt cedar on up to 500 acres in segment 2. Up to 200 cottonwood and willow poles would be planted on up to 100 acres in segment 3. Up to five new upland water sources for use by livestock would be developed to improve riparian areas.

Up to five miles of fences, including enclosures, would be constructed to improve riparian areas, according to the Bill Williams Riparian Management Area Plan. Road development in segment 2 would be prohibited on 486 acres within 1/2 mile of bald eagle nests. Helicopter flights in segment 2 would be prohibited within 1/2 mile of active bald eagle nests during the breeding season on 486 acres. These actions would enhance riparian communities, and improve habitat for wildlife such as bald eagles, southwestern willow flycatcher and mule deer.

These actions would provide administrative protection to the outstandingly remarkable fish and wildlife habitat values.

The lands in the study area in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), it is reasonable to expect some development in the next 20 years. The mining scenario applies here.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable fish and wildlife habitat values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values. Reclamation, required by the mining laws, would provide some mitigation.

• Conclusion

Implementation of the no action alternative could have minor adverse impacts on the study area's outstandingly remarkable fish and wildlife habitat values in segment 2 from one small mining operation. Fish and wildlife habitat values would not receive long-term legislative protection on 486 acres of the study area.

Impacts on Mineral Development

According to U.S. Geological Survey Bulletin 1704-C (USGS 1990), the wild and scenic river study area contains no identified metallic mineral resources. The area also lacks the potential for oil and gas resources.

Sand and gravel deposits found in the area possess no unique characteristics that would make them more desirable than similar deposits outside the study area.

Nearly 2,300 acres in segment 1 in the Rawhide Mountains Wilderness and 1,850 acres in segment 3 in the Swansea Wilderness are withdrawn from mineral entry and mineral leasing, and are closed to mineral material disposal in accordance with the Wilderness Act.

In the 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2, the riparian zone is recommended for withdrawal from mineral entry. Mineral

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leasing would be allowed in the riparian zone with no surface occupancy. Bureau of Land Management approval for plans of operations would be required for all mineral exploration and development activities, above the level of casual use, outside the riparian zone.

On the 486 acres of the Three Rivers Riparian Area of Critical Environmental Concern in segment 2, mineral material disposal would be prohibited.

The lands in the study area in segment 2 are open to entry under the mining law and open to leasing under the mineral leasing laws. Although the suitability assessment states that there are no mining claims and no mineral leases in the study area and no new claims are anticipated in the foreseeable future (BLM 1993), consideration of the mining scenario is appropriate.

In the scenario, one small mine would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

- Conclusion

Implementation of the no action alternative would not have an adverse impact on minerals development because mineral exploration and development activities would not be further restricted through designation as a wild and scenic river.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Bill Williams River Wild and Scenic River suitability environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January 1993.

B. ELIGIBILITY

Determinations were made in the Kingman Resource Management Plan (1993) and the Yuma Resource Management Plan Amendment (1994) that the Bill Williams River was eligible for further wild and scenic river study. These determinations were based on full public involvement in compliance with the National Environmental Policy Act. The Yuma District Resource Management Plan Amendment is on file at the Havasu Resource Area Office, Lake Havasu, Arizona. The Kingman Resource Management Plan is on file at the Kingman Resource Area Office, Kingman, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Bill Williams River study area were held in Parker March 29, 1993 and Phoenix April 14. Twenty to 25 people attended the Parker

meeting and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land

BILL WILLIAMS RIVER WILD AND SCENIC RIVER STUDY AREA

Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

BILL WILLIAMS RIVER WILD AND SCENIC RIVER STUDY AREA

REFERENCES

Arizona Department of Commerce

- 1991 Arizona Labor Market Information Newsletter 15 (2), Nonmetropolitan Counties Labor Force and Employment, 1990, Phoenix, Arizona, February, 1991

Arizona Department of Economic Security

- ND Community Profiles, Phoenix, Arizona (published periodically)

Arizona Game and Fish Department

- 1991 Arizona Rivers Assessment Data - Phase I, Phoenix, Arizona, 1991

Arizona Rivers Coalition

- 1991 Arizona Rivers - Lifeblood of the Desert (A Citizens Proposal for the Protection of Rivers in Arizona), Phoenix, Arizona

Public Laws

- 1968 P.L. 90-542 as amended, Wild and Scenic Rivers Act of 1968
- 1969 P.L. 91-190 as amended, The National Environmental Policy Act of 1969
- 1976 P.L. 54-579 as amended, The Federal Land Policy and Management Act of 1976

U.S. Bureau of Land Management

- 1989 Bill Williams Riparian Management Area Plan, Yuma, Arizona
- 1993 Kingman Resource Management Plan and Final Environmental Impact Statement, Phoenix, Arizona
- 1992 Manual Section 8351: Wild and Scenic Rivers - Policy and Program Direction for Identification, Evaluation, and Management, Washington, D.C.
- 1994 Yuma District Resource Management Plan Amendment, Yuma, Arizona

U.S. Bureau of the Census

- 1990 Population Projections for Arizona Places, Arizona Revised Population Estimates: 1981-1989 and Population Projections, May, 1990
- 1988 Population Estimates (1988) and Per Capita Income (1987) for Counties, Incorporated Places and Selected Towns and Townships: Arizona, 1990.

**BONITA CREEK
WILD AND SCENIC RIVER STUDY AREA**

**GILA RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



BONITA CREEK WILD AND SCENIC RIVER

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BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

SECTION I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

A segment of Bonita Creek was identified in the Safford District Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending this segment of Bonita Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF THE BONITA CREEK STUDY AREA

The Bonita Creek Wild and Scenic River Study Area is in southeastern Arizona 15 miles northeast of Safford in Graham County. The segment under consideration is approximately fifteen miles long extending south from the San Carlos Apache Reservation to the confluence with the Gila River. The legal description is

from the SW1/4, Sec. 27, T. 4 S., R. 27 E. to NE1/4 SE1/4, Sec. 21, T. 6 S., R. 28 E. This reach is considered one segment with a patchy distribution of resources and values.

This segment was determined to be eligible for consideration in the Safford District Resource Management Plan because it is free flowing and has remarkable fish and wildlife, riparian, water quality, recreational and cultural values. This segment is tentatively classified as Recreational due to the presence of roads and other developments along its length.

Bonita Creek lies within the Basin and Range Physiographic Province in a transition zone between the Sonoran and Chihuahuan biotic communities. Consequently, the study area is characterized by high biological diversity. This stream drains approximately 360 square miles, most of which is within the San Carlos Apache Reservation.

Most of the land is in public ownership, although nine moderate-size parcels totaling 970 acres are owned by the City of Safford or private entities.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE BC-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

BONITA CREEK	BLM	CITY OF SAFFORD	PRIVATE	TOTAL
TOTAL MILES	10.1	2.5	2.4	15.0
PERCENT	67.4	16.6	16.0	100
TOTAL ACRES	3,570	480	490	4,540
PERCENT	78.6	10.6	10.8	100
SUBSURFACE MINERALS ACRES	4,300	0	240	4,540

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The Arizona Desert Wilderness Act of 1990 designated this segment of Bonita Creek and portions of the Gila River (Gila Box) as a Riparian National Conservation Area. The purpose of the riparian national conservation area, as stated in the Act, is to protect, conserve and enhance the riparian and

associated areas, as well as the recreational, cultural, and scientific values of the area. The Desert Wilderness Act also reserved a quantity of water sufficient to achieve the stated purposes of the riparian national conservation area.

The Bureau of Land Management was directed by this Act to prepare a management plan for the area. The draft management plan was released for public comment in 1993.

**TABLE BC-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE BONITA CREEK
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

BONITA CREEK STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL Study area
GILA BOX Riparian National CONSERVATION AREA	3,570	100

2. Department of Interior

The Bureau of Indian Affairs is involved in the management of the San Carlos Apache Reservation. The reservation lies to the north of the segment of Bonita Creek under consideration and contains the entire upper

watershed.

3. State of Arizona

In 1992, the Arizona Department of Environmental Quality designated Bonita Creek as a Unique Water under Arizona State law.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

Arizona Game and Fish Department coordinates with the Bureau of Land Management in managing fish and wildlife in the Bonita Creek area.

4. Local Government

The city of Safford has several rights-of-way and a municipal water collection system in this study area. The water system supplies approximately 75 percent of the water needs for 15,000 residents of the Safford area and is located on land deeded to the city in the creek bottom.

The city also holds rights-of-way for the water system, an access road paralleling the pipeline and access to a well in the upper reach near the reservation boundary. These rights-of-way are located in the canyon bottom close to the stream.

5. Private

Several parcels of private property exist within this study area. All parcels other than those owned by the city of Safford have been identified as suitable for acquisition by the Bureau of Land Management in the Safford District Resource Management Plan.

D. SCOPING

Scoping meetings specifically highlighting the Bonita Creek study area were held in Tucson on April 13, 1993, Phoenix April 14, 1993, and Safford, April 20, 1993. Thirty-five to 40 signed the register at the Tucson meeting. Fifty-five to 60 people attended the Phoenix meeting, and about 50 attended the meeting in Safford.

The issues raised in the scoping meetings concern the impacts of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on water rights
- Impacts on mineral development
- Impacts on the future development of dams for flood control or water storage
- Impacts on the private property base and property values
- Impacts to federal agencies (cost of management)
- Impacts of designation of rivers and streams with ephemeral and intermittent flow regimes.
- Impacts of dual riparian national conservation area and wild and scenic river designation
- Impacts of too many rivers in Graham County being considered for designation
- Need to make the evaluation and designation process more open to the public
- Need process to remove rivers from the list
- Impacts on operation of the city water system
- Impacts on tourism
- Impacts on grazing
- Impact on potential commercial and residential development in towns and cities
- Impacts on access to public lands
- Impacts on outstandingly remarkable fish and wildlife habitat values
- Impacts on outstandingly remarkable riparian resource values
- Impacts on outstandingly remarkable historic and cultural resource values
- Impacts on outstandingly remarkable water quality values
- Impacts on outstandingly remarkable recreational opportunities

Issues Considered but not Addressed

- impacts on water rights.

A federal reserved water right was granted to the portion of Bonita Creek designated as the Gila Box Riparian National Conservation Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right is on-going and the Bureau of Land Management will submit notification to the State of Arizona.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

The Bureau of Land Management filed an instream flow water right application (No.33-90250) for Bonita Creek with the Arizona Department of Water Resources in October 1985. The beneficial uses identified in this application include fish, wildlife, riparian and recreation. The application has been protested by the San Carlos Irrigation and Drainage District and the protest remains unresolved.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further.

- impacts on mineral development.

The entire 4,300 acres of federal mineral estate within the Bonita Creek study area was withdrawn from future mineral entry and mineral leasing by the Arizona Desert Wilderness Act of 1990. Title II of this act designated the Gila Box Riparian Natural Conservation Area. Valid existing claims will continue to be recognized.

The Dorothy B block of claims is the only mining claim in the study area. A validity exam of these claims will be completed under all alternatives. The future of mining activity in this study area depends entirely on the findings of these exams.

This issue will not be discussed further.

- impacts on the future development of dams for flood control or water storage.

There are no current proposals for the construction of dams or flood control structures on Bonita Creek.

This issue will not be discussed further.

- impacts on the private property base and property values.

Acquisition of non-federal land is a management objective in the Gila Box Interdisciplinary Activity Plan. A total of 490 acres of private land in the study area is identified for acquisition. The 480 acres of land owned by the City of Safford is not identified for acquisition. This plan has undergone thorough public review. The Safford District Resource Management Plan identifies more public land in Graham County for disposal than private land for acquisition. No additional land in the study area will be identified for acquisition if Bonita Creek is designated under the Wild and Scenic Rivers Act. The acquisition of 490 acres of nonfederal land in the study area will not result in a significant impact to the private property base in Graham County.

The acquisition process would only move forward and be completed on a willing seller-willing buyer basis. Wild and scenic river designation is not expected to impact property values in the area.

This issue will not be discussed further.

- impacts to federal agencies (cost of management).

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

The Wild and Scenic Rivers Act requires that all eligible rivers be evaluated for suitability for inclusion in the National Wild and Scenic Rivers System. The cost of management has been estimated in the suitability assessment for each of the study areas. It will be addressed further when specific management plans are developed.

This issue will not be considered further.

- Designation of rivers and streams with ephemeral and intermittent flow regimes.

According to Bureau of Land Management policy (MS 8351), a river need not be "boatable or floatable" in order to be eligible. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain the outstandingly remarkable values identified within the study area.

Rivers with intermittent flows exist within the National Wild and Scenic Rivers System, and rivers representative of desert ecosystems having outstanding ecological or other values, should be considered.

This issue will not be considered further.

- impacts of dual riparian national conservation area and wild and scenic river designation.

There would be no environmental impacts from dual management designation since the management actions would always comply with the most stringent requirements for the area.

For example, in a study area designated as a Wild river which also is under riparian national conservation area management, mineral entry would be closed due to the wild and scenic river designation regardless of guidance in the area of riparian national conservation area.

This issue will not be discussed further.

- Too many rivers in Graham County are being considered for designation.

The rivers in Graham County on lands administered by the Bureau of Land Management were studied for eligibility as part of the resource management planning process. Public review and comments on the draft resource management plan were considered in the decision making process.

This issue will not be considered further.

- Need to make the evaluation and designation process more open to the public.

The Bureau of Land Management has rigorously followed appropriate requirements in its scoping and public review processes for wild and scenic river eligibility determination and suitability recommendation. The process encourages public input and is described in detail in the sections on scoping and public involvement in this document.

This issue will not be discussed further.

- Need process to remove rivers from the list.

Congress designates rivers to the National Wild and Scenic Rivers System. Congress also has the authority to remove rivers from the system.

This issue will not be discussed further.

- impacts on operation of the city water system.

The Safford municipal utilities infiltration gallery is located about four miles above the mouth of Bonita Creek in the streambed. Approximately 75 percent of the Safford City water supply originates in Bonita Creek and provides a water supply for approximately 15,000 Safford area residents.

The city established an infiltration gallery in the stream bottom in the 1930s and replaced and modified the system several times in the following decades. Safford has several rights-of-ways and a municipal water collection system in this study area.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

Existing rights-of-way owned by the City of Safford will continue to be valid. The city water system will continue to operate under all of the alternatives.

This issue will not be discussed further.

- Impacts on tourism.

Upward trends in recent visitor use, proposed developments of new recreational sites, improvements in access to the area, increased public awareness of the area associated with designation of the Gila Box Riparian National Conservation Area and a wild and scenic river designation lead Bureau of Land Management specialists to conclude a moderate increase in visitor use of the area can be expected in the foreseeable future.

However, by itself the wild and scenic river designation is not expected to lead to a substantial increase in tourism.

This issue will not be discussed further.

- Impacts on grazing.

Three active grazing allotments are partially contained in the Bonita Creek study area. The study area contains from 3 - 12 percent of the acreage in these allotments. However, the actual percentage of the allotment in the study area that is grazed is lower due to the steep terrain in most allotments.

The Bureau of Land Management's management emphasis has been on controlling livestock use in the river bottom. Allotment management plans have been developed and have changed the traditional, unrestricted yearlong use to managed, seasonal use through grazing systems and riparian pastures in many allotments. Water sources have been developed on the uplands to reduce dependency on water in the river.

Grazing is expected to continue in the study area. Livestock grazing will be excluded from

eight miles of the riparian zone. Seasonal use will be allowed in seven miles of the riparian areas. New water sources and fencing will be constructed in the uplands. The grazing strategy is designed to reduce impacts to the riparian areas while maintaining good to excellent conditions in the uplands.

Designation of Bonita Creek as a wild and scenic river is not expected to affect on-going grazing management in the area.

This issue will not be discussed further.

- impact on potential commercial and residential development in towns and cities.

Implementation of the alternatives is not expected to change current commercial and residential conditions because Bureau of Land Management actions apply only to federal lands under Bureau of Land Management administrative responsibility. Actions taken under the Wild and Scenic Rivers Act would not apply to private or state lands.

This issue will not be discussed further.

- impacts on access to public lands.

Implementation of the alternatives will not affect access to the study area. Access to the area is addressed in the Safford District Resource Management Plan and the draft Gila Box Interdisciplinary Activity Plan.

Up to 11 existing roads will be maintained or improved. One new road will be constructed in the upland area. The miles of road in the riparian areas will be reduced from 15 miles to four to seven miles. Existing rights-of-ways owned by the Safford in the study area will continue to be recognized as valid. Off highway vehicles are limited to designated roads.

The transportation system developed in the draft Gila Box Plan will improve access to the study

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

area in an ecologically sensitive manner.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the

scoping meetings and on the draft environmental impact statement to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the wild and scenic study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

Recommended alternative
All suitable
No action/not suitable

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines that one segment of Bonita Creek, containing 8.1 miles of river and 1,810 acres of public land, is suitable and recommends it to Congress for inclusion in the National Wild and Scenic Rivers System as Recreational. The segment is that part of Bonita creek from the San Carlos Apache Reservation downstream to Lee Trail Road. The lower 6.9 miles, from Lee Trail Road to the confluence with the Gila River, are determined nonsuitable.

The recommended portion of the Bonita Creek study area is within the boundary of the Gila Box Riparian National Conservation Area. This area was established by the Arizona Desert Wilderness Act of 1990 and will be managed by the Bureau of Land Management under the draft Gila Box Interdisciplinary Activity Plan.

The purpose of the Act is to protect, conserve, and enhance the riparian and associated areas; and the aquatic, wildlife, archaeological, paleontological, scientific, cultural, recreational, educational, scenic, and other resources and values of this area.

The following summarizes management actions for selected resources if the recommended alternative is selected.

Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following would be initiated for a Recreational river designation. Where there might be overlap with ongoing actions, the most stringent would be followed.

- Water quality would be maintained or improved to meet Arizona State standards.
- New hydroelectric power facilities would be prohibited. Existing low dams, diversion works, riprap, and other minor structures would be permitted. New structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
- New mining claims would be allowed and existing operations could continue. Reasonable mining claim and mineral lease access would be permitted. Mining patents would be restricted to the mineral estate.
- Existing parallel roads would be allowed to remain.
- Livestock grazing would continue.
- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

- Recreational use would be encouraged but public use and access may be regulated to protect and enhance recreational values.
- New rights-of-way such as transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate routes exists, additional or new facilities would be restricted to existing rights-of-way.
- Motorized travel would be permitted.
- Instream flow would be quantified. An assessment would be developed in order to secure instream flows associated with protecting the outstandingly remarkable values.
- New minor structures for fish and wildlife habitat protection would be permitted.

Ongoing management actions

Ongoing management actions in the Bonita Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the draft Gila Box Riparian National Conservation Area Management Plan and the Safford District Resource Management Plan.

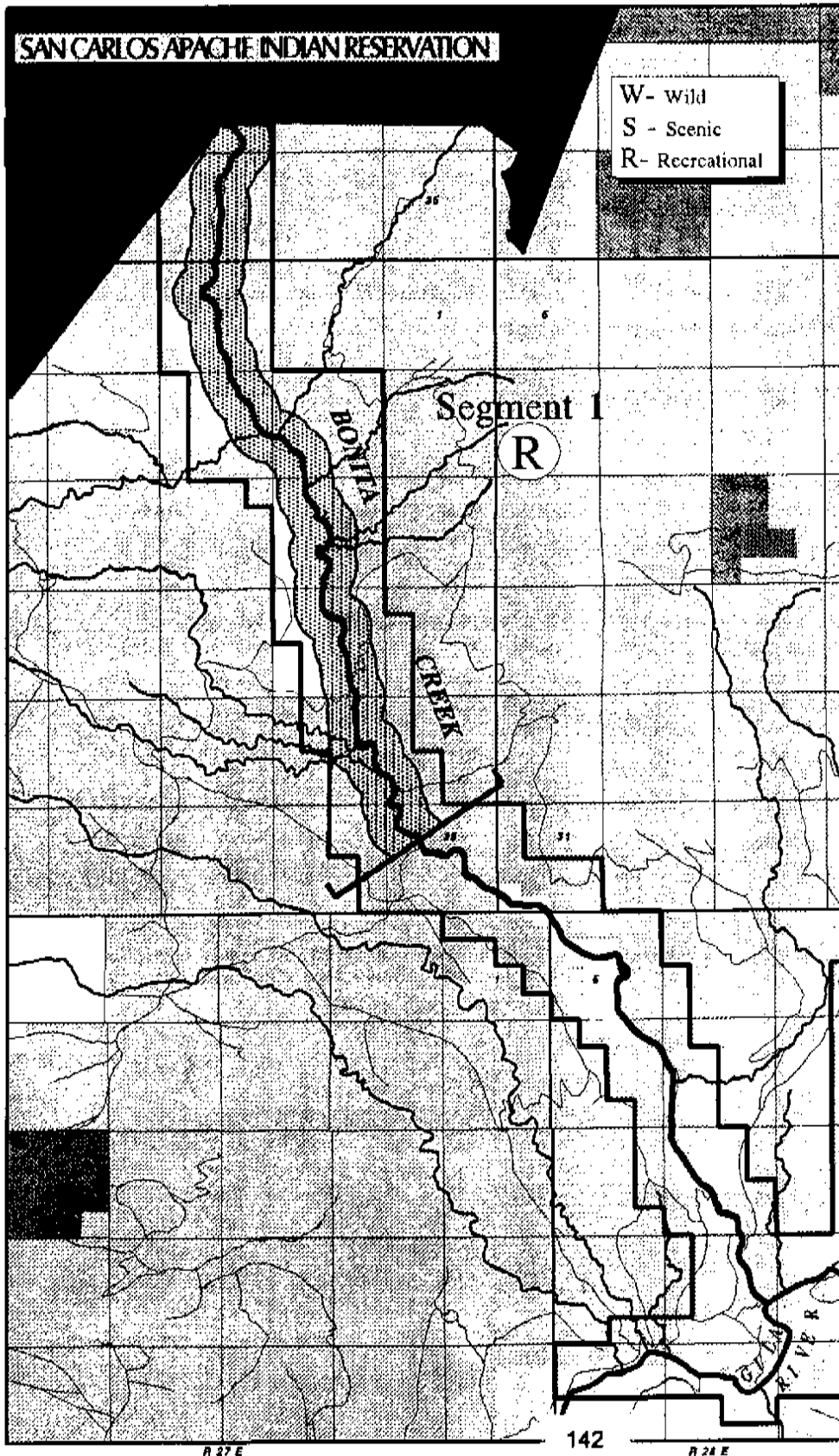
- Access to public lands in the study area will be improved by constructing one new road and improving up to 11 existing roads.
- Existing rights-of-way owned by the Safford in the study area will continue to be recognized as valid.
- 490 acres of nonfederal land identified for acquisition would be acquired on a willing buyer-willing seller basis.
- Specific wildlife management actions will reduce impacts, improve habitat, and protect priority, as well as threatened and endangered species.
- Inventories and studies will monitor populations and establish relationships between

species and habitat parameters.

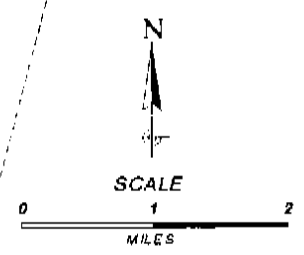
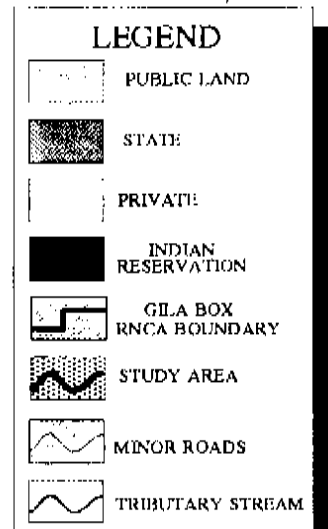
- Exclude eight miles of riparian area from grazing and establish seasonal grazing on the remaining seven miles of riparian area.
- Reduce the miles of riparian roads from 15 miles to four to seven miles.
- Recreational developments and activities will be located in the uplands and designed to prevent conflicts with other resources and uses.
- Priority as well as threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.
- Management actions will meet the Bureau of Land Management objectives for riparian vegetation.
- Activities would be managed to reduce impacts to vegetation by implementing enhancement projects in specific locations such as road crossings and around recreational developments.
- A prescribed natural fire plan will be developed and implemented.
- No woodcutting is allowed in the 207 acres of riparian vegetation in the study area.
- Complete a cultural resource inventory of the Bonita Creek study area including recording of inaccessible sites and completing a library and archives record search.
- Monitor Bonita Creek archaeological sites on a regular basis.
- Develop public information and education through on-site interpretation, brochures and tours.
- Stabilize fragile sites including Pueblo Devol cliff dwelling and the Old Lady Gay Cabin.

BONITA CREEK

(Recommended Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA
October 1994

R 27 E

142

R 28 E

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

- Interpret Pueblo Devol, Gila River bridge and the Serna Cabin.
- Proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Cultural resources will be managed through a combination of inventories, protection, studies, stabilization, and interpretation identified in the draft Gila Box Plan and designed to meet provisions of the federal laws applicable to cultural resources.
- Management actions will protect the quantity and quality of water by modifying use of the area for grazing, recreation, road access, and off-highway vehicles to reduce impacts to water quality.
- Water quantity will be protected through the acquisition of instream flow water rights from the state of Arizona and the quantification of the federal reserved water right granted in the Arizona Desert Wilderness Act of 1990.
- Water quality will be protected through monitoring for compliance with Arizona State standards until more stringent standards are established for the Bonita Creek Unique Waters designation.

- Actions taken to benefit riparian vegetation also will enhance channel stability and reduce sedimentation.
- Grazing will continue in the upland areas of the study area.
- One new well, five water points, five to 11 new storage tanks, six to 20 miles of new pipeline, and one to 30 miles of new fencing will be constructed in the upland areas.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that 3,570 acres of public land in the Bonita Creek study area are suitable and recommends them to Congress for inclusion in the National Wild and Scenic Rivers System for designation as Recreational. The Bonita Creek study area is within the boundaries of the Gila Box Riparian National Conservation Area. This area was established by the Arizona Desert Wilderness Act of 1990 and will be managed by the Bureau of Land Management under the draft Gila Box Interdisciplinary Activity plan.

The purpose of the Act is to protect, conserve, and enhance the riparian and associated areas; and the aquatic, wildlife, archaeological, paleontological, scientific, cultural, recreational, educational, scenic, and other resources and values of this area.

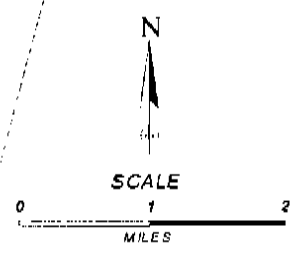
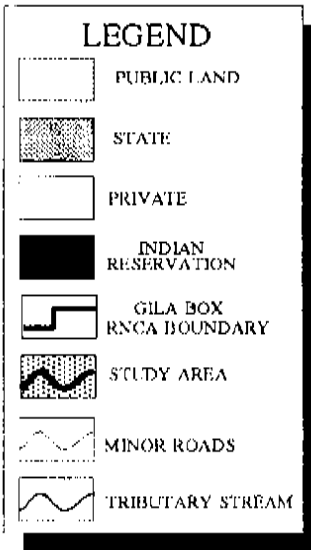
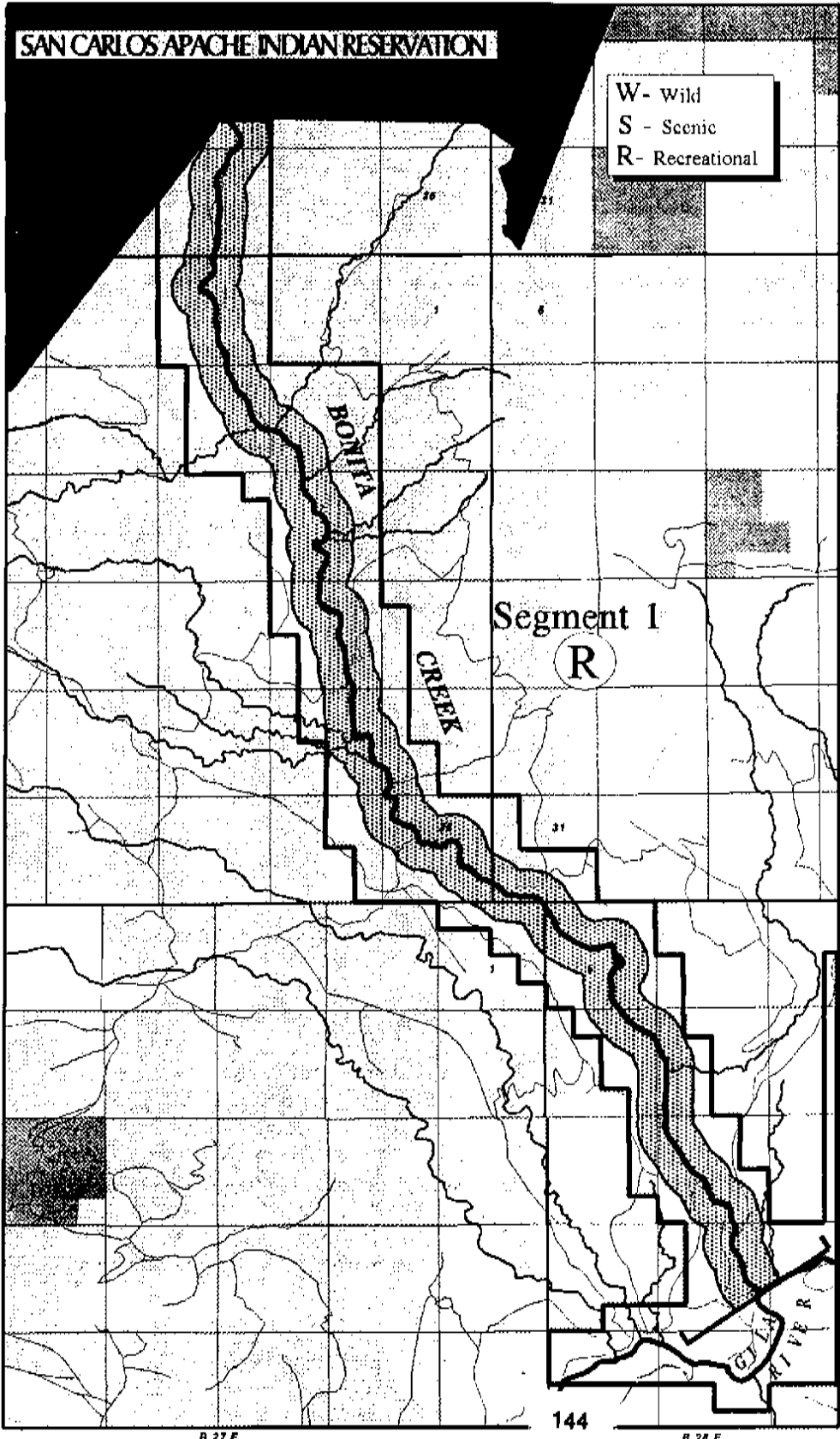
The following summarizes management actions for selected resources under the all suitable alternative.

Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following would be initiated for a Recreational river designation. Where there might be overlap with ongoing actions, the most stringent would be followed.

BONITA CREEK

(All Suitable Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
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- Water quality would be maintained or improved to meet Arizona State standards
- New hydroelectric power facilities would be prohibited. Existing low dams, diversion works, riprap, and other minor structures would be permitted. New structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
- New mining claims would be allowed and existing operations could continue. Reasonable mining claim and mineral lease access would be permitted. Mining patents would be restricted to the mineral estate.
- Existing parallel roads would be allowed to remain.
- Livestock grazing would continue.
- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreational use would be encouraged but public use and access may be regulated to protect and enhance recreational values.
- New rights-of-way such as transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate routes exists, additional or new facilities would be restricted to existing rights-of-way.
- Motorized travel would be permitted.
- Instream flow would be quantified. An assessment would be developed in order to secure instream flows associated with protecting the outstandingly remarkable values.
- New minor structures for fish and wildlife habitat protection would be permitted.

Ongoing management actions

Ongoing management actions in the Bonita

Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the draft Gila Box Riparian National Conservation Area Management Plan and the Safford District Resource Management Plan.

- Access to public lands in the study area will be improved by constructing one new road and improving up to 11 existing roads.
- Existing rights-of-way owned by the City of Safford in the study area will continue to be recognized as valid.
- 490 acres of nonfederal land identified as suitable for acquisition will be acquired on a willing buyer-willing seller basis.
- Specific wildlife management actions will reduce impacts, improve habitat, and protect priority, as well as threatened and endangered species.
- Inventories and studies will monitor populations and establish relationships between species and habitat parameters.
- Exclude eight miles of riparian area from grazing and establish seasonal grazing on the remaining seven miles of riparian area.
- Reduce the miles of riparian roads from 15 miles to four to seven miles.
- Recreational developments and activities will be located in the uplands and designed to prevent conflicts with other resources and uses.
- Priority as well as threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.
- Management actions will meet the Bureau of Land Management objectives for riparian vegetation.
- Activities would be managed to reduce

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

impacts to vegetation, implementing enhancement projects in specific locations such as road crossings and around recreational developments.

- No woodcutting is allowed in the 207 acres of riparian vegetation in the study area.
- A prescribed natural fire plan will be developed and implemented.
- Complete a cultural resource inventory of the Bonita Creek study area including recording of inaccessible sites and completing a library and archives record search.
- Monitor Bonita Creek archaeological sites on a regular basis.
- Develop public information and education through on-site interpretation, brochures and tours.
- Stabilize fragile sites including Pueblo Devol cliff dwelling and the Old Lady Gay Cabin.
- Interpret Pueblo Devol, Gila River bridge and the Serna Cabin.
- Proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

- Cultural resources will be managed through a combination of inventories, protection, studies, stabilization, and interpretation identified in the draft Gila Box Plan and designed to meet provisions of the federal laws applicable to cultural resources.

- Management actions will protect the quantity and quality of water by modifying use of the area for grazing, recreation, road access, and off-highway vehicles to reduce impacts to water quality.

- Water quantity will be protected through the acquisition of instream flow water rights from the State of Arizona and the quantification of the federal reserved water right granted in the Arizona Desert Wilderness Act of 1990.

- Water quality will be protected through monitoring for compliance with Arizona State standards until more stringent standards are established for the Bonita Creek Unique Waters designation.

- Actions taken to benefit riparian vegetation also will enhance channel stability and reduce sedimentation.

- Grazing will continue in the upland areas of the study area.

- One new well, five water points, five to 11 new storage tanks, six to 20 miles of new pipeline, and one to 30 miles of new fencing will be constructed in the upland areas.

D. NO ACTION ALTERNATIVE

The no action alternative determines that the Bonita Creek study area is not suitable for inclusion in the National Wild and Scenic Rivers System.

Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and return the study area to applicable multiple use management prescriptions.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

The Bonita Creek Study area is within the boundaries of the Gila Box Riparian National Conservation Area. This area was established by the Arizona Desert Wilderness Act of 1990 and will be managed by the Bureau of Land Management under the draft Gila Box Interdisciplinary Activity Plan.

The purpose of the Act is to protect, conserve, and enhance the riparian and associated areas; and the aquatic, wildlife, archaeological, paleontological, scientific, cultural, recreational, educational, scenic, and other resources and values of this area.

Wild and Scenic River management actions

In the no action alternative the study area would not be recommended for designation and management actions associated with wild and scenic River legislation would not occur.

Ongoing management actions

Other existing management actions in the Bonita Creek study area would continue. The following are selected management actions from the Gila Box Riparian National Conservation Area Management Plan and the Safford District Resource Management Plan.

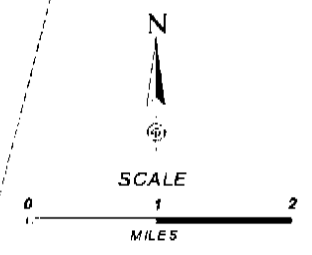
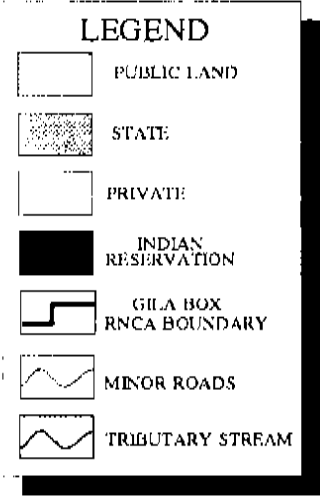
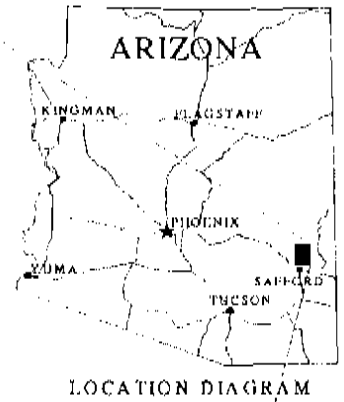
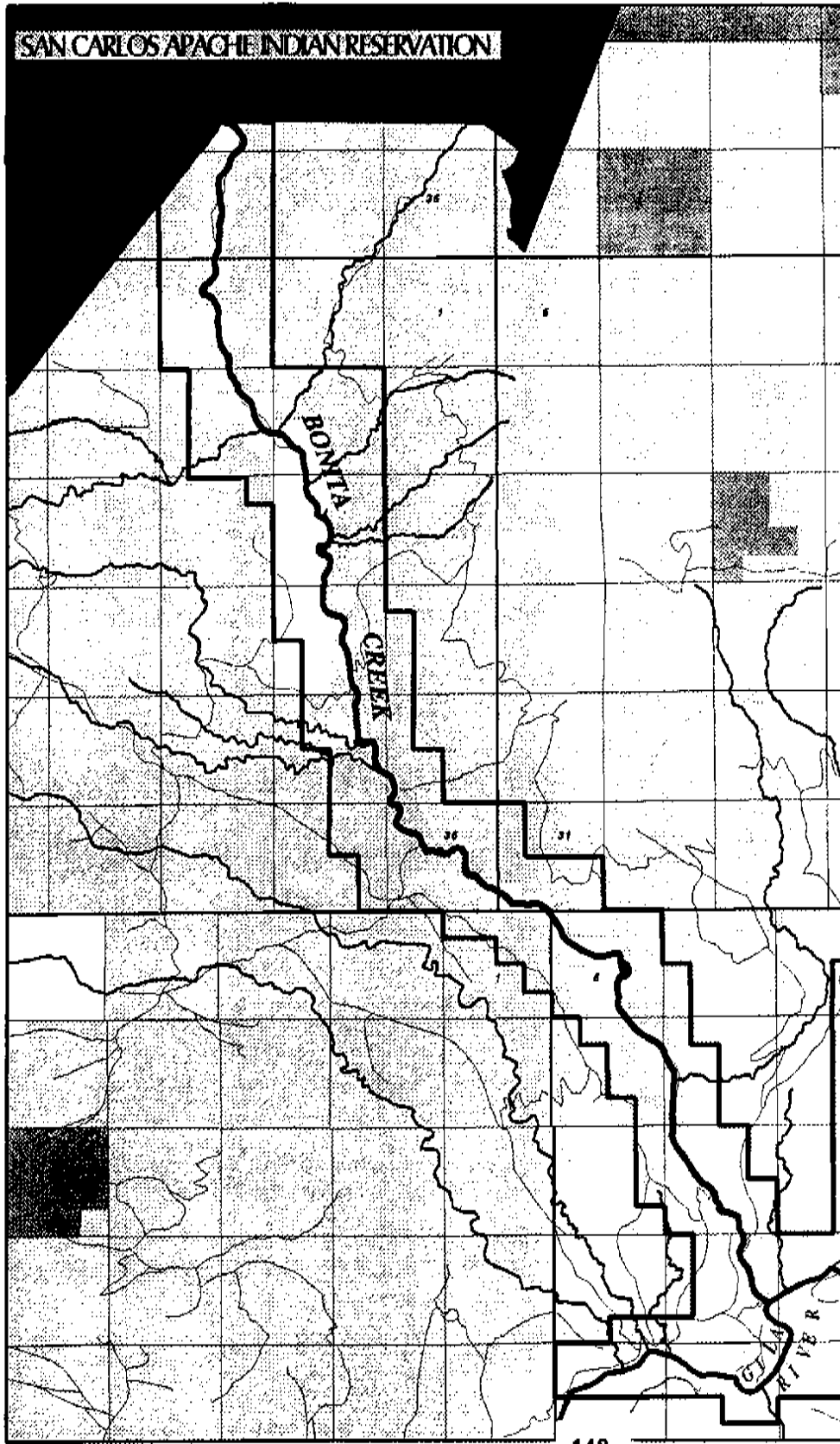
- Access to public lands in the study area will be improved by constructing one new road and improving up to 11 existing roads.
- Existing rights-of-way owned by the City of Safford in the study area will continue to be recognized as valid.
- 490 acres of nonfederal land identified as suitable for acquisition will be acquired on a willing buyer-willing seller basis.
- Specific wildlife management actions will reduce impacts, improve habitat, and protect priority, as well as threatened and endangered species.
- Inventories and studies will monitor

populations and establish relationships between species and habitat parameters.

- Exclude eight miles of riparian area from grazing and establish seasonal grazing on the remaining seven miles of riparian area.
- Reduce the miles of riparian roads from 15 miles to four to seven miles.
- Recreational developments and activities will be located in the uplands and designed to prevent conflicts with other resources and uses.
- Priority as well as threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.
- Management actions will meet the Bureau of Land Management objectives for riparian vegetation.
- Activities would be managed to reduce impacts to vegetation, implementing enhancement projects in specific locations such as road crossings and around recreational developments.
- No woodcutting is allowed in the 207 acres of riparian vegetation in the study area.
- A prescribed natural fire plan will be developed and implemented.
- Complete a cultural resource inventory of the Bonita Creek study area including recording of inaccessible sites and completing a library and archives record search.
- Monitor Bonita Creek archaeological sites on a regular basis.
- Develop public information and education through on-site interpretation, brochures and tours.
- Stabilize fragile sites including Pueblo Devol cliff dwelling and the Old Lady Gay Cabin.

BONITA CREEK

(No Action Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA
October 1994

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

- Interpret Pueblo Devol, Gila River bridge and the Serna Cabin.
- Proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Cultural resources will be managed through a combination of inventories, protection, studies, stabilization, and interpretation identified in the draft Gila Box Plan and designed to meet provisions of the federal laws applicable to cultural resources.
- Management actions will protect the quantity and quality of water by modifying use of the area for grazing, recreation, road access, and off-highway vehicles to reduce impacts to water quality.
- Water quantity will be protected through the acquisition of instream flow water rights from the State of Arizona and the quantification of the federal reserved water right granted in the Arizona Desert Wilderness Act of 1990.
- Water quality will be protected through monitoring for compliance with Arizona State standards until more stringent standards are established for the Bonita Creek Unique Waters designation.
- Actions taken to benefit riparian vegetation also will enhance channel stability and reduce sedimentation.
- Grazing will continue in the upland areas of the study area.
- One new well, five water points, five to 11 new storage tanks, six to 20 miles of new pipeline, and one to 30 miles of new fencing will be constructed in the upland areas.

E. ALTERNATIVES CONSIDERED BUT REJECTED

No other alternatives were recommended by the public or other agencies. No other alternatives were considered by the Bureau of Land Management.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

TABLE BC-3

COMPARISON OF IMPACTS BY ALTERNATIVE

Issues	Recommended alternative	All suitable	No action (not suitable)
Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values	Beneficial impact for Habitat; Potential indirect adverse impact from increased visitation; Beneficial impact from long-term legislative protection	Beneficial impact for Habitat; Potential indirect adverse impact from increased visitation; Beneficial impact from long-term legislative protection	Beneficial impact for Habitat; Potential indirect adverse impact from increased visitation; No long-term wild and scenic river legislative protection
Impacts on Outstandingly Remarkable Cultural Resource Values	Beneficial impact for all except vandalism; Potential indirect adverse impact from increased visitation; Beneficial impact from long-term legislative protection	Beneficial impact for all except vandalism; Potential indirect adverse impact from increased visitation; Beneficial impact from long-term legislative protection	Beneficial impact for all except vandalism; Potential indirect adverse impact from increased visitation; No long-term wild and scenic river legislative protection
Impacts on Outstandingly Remarkable Water Quality Values	Beneficial impact; Beneficial impact from long-term legislative protection	Beneficial impact; Beneficial impact from long-term legislative protection	Beneficial impact; No long-term wild and scenic river legislative protection
Impacts on Outstandingly Remarkable Riparian Values	Beneficial impact; Beneficial impact from long-term legislative protection	Beneficial impact; Beneficial impact from long-term legislative protection	Beneficial impact; No long-term wild and scenic river legislative protection
Impacts on Outstandingly Remarkable Recreational Opportunities	Beneficial impact; Negative impact to off-highway vehicle users; Beneficial impact from long-term legislative protection	Beneficial impact; Negative impact to off-highway vehicle users; Beneficial impact from long-term legislative protection	Beneficial impact; Negative impact to off-highway vehicle users; No long-term wild and scenic river legislative protection

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources along Bonita Creek that could be affected by the implementation of the alternatives for recommending the study area for inclusion in the wild and scenic rivers system.

Further information is contained in the Safford District Resource Management Plan, the draft Gila Box Interdisciplinary Activity Plan, and the Bonita Creek Wild and Scenic Suitability Determination Assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Safford District Resource Management Plan identified fish and wildlife habitat values, riparian, water quality, recreational and cultural resources as outstandingly remarkable in determining that Bonita Creek is eligible for consideration as a wild and scenic river. They are discussed individually in the following sections.

B. MINERALS

The study area is not in any established mineral district, but lies between large porphyry copper mining districts to the northeast and southwest. The Copper Mountain Mining District is about 12 miles northeast of the study area, around Clifton and Morenci. This is one of the most significant mining districts in the United States.

Five miles southwest and seven miles west of the study area, large amounts of porphyry copper have been found in the Sanchez, San Juan, Dos Pobres, and Lone Star Mining Districts. These ore bodies are undeveloped, but production is scheduled to begin in the Sanchez District in 1994. Preliminary work to develop the Lone Star property is also underway.

The only existing mining operation in the study area is the Dorothy B, a block of 23 claims

encompassing the confluence of the Gila River and Bonita Creek.

The Dorothy B mining claims are gold placer claims. New exploration took place as recently as 1992. The claim group has been worked sporadically over the past 20 to 30 years with little reported success. According to the U.S. Geological Survey and the Bureau of Mines, the potential for placer gold in the study area is low to very low (Richter, et al, 1982).

The Arizona Desert Wilderness Act of 1990 designated the Gila Box as a Riparian National Conservation Area, closing all lands within the national conservation area, including all of the Bonita Creek study area to mineral entry.

Only valid existing claims will continue to be recognized. The future of mining in the study area depends on the findings of the validity exam on the Dorothy B claim.

There are no leasable minerals with production potential in the study area. The area is not considered prospectively valuable for coal, oil, gas, or phosphate.

Salable minerals, such as sand and gravel, are common and widespread throughout the region. There are no existing operations in the study area and future demand for sand and gravel could easily be accommodated from other sources outside the study area.

C. LANDS

Major access to Bonita Creek is provided by the Sanchez and the Solomon Pass Roads and then along various primitive dirt roads. Roads to the mouth of Bonita Creek and the Lee Trail area are well maintained and passable by passenger vehicles.

Roads to the more remote sections of the creek and the remaining road upstream of the city water system in the creek bottom require high

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

clearance and four wheel drive to be negotiated safely.

Eight roads provide access to the Bonita Creek Study Area. These include the Christensen, Brushy Canyon, Red Knolls Canyon/Hackberry Spring, Lee Trail/Jones, West Bonita Rim, City Pipeline, Kearny Camp, and Bullgap Roads. These roads will be maintained to provide public access to Bonita Creek and for the Bureau of Land Management's administration of the national conservation area.

The City of Safford has a municipal water collection system on land owned by the city in the creek bottom, and rights-of-way for a 16-inch pipeline and access road on public land, within the study area. This system is critical to the residents of the Safford Valley and will continue to operate for the foreseeable future.

D. RECREATION

Recreation is one of the identified outstandingly remarkable values of the study area. Pleasure driving, waterplay, picnicking, camping, birdwatching, archaeological site study, and hiking are popular activities in Bonita Creek. The canyon is a very popular undeveloped recreational area for residents of the Safford Valley. Estimated annual visitation is about 15,000 visitor use days.

Local residents traditionally use the area near the mouth of the creek for picnics and day outings. Several picnic/camp areas between the confluence with the Gila River and the water collection gallery receive limited use. Other portions of the study area, upstream of the water system, receive less attention from recreationists. Access to these upstream areas are along rough primitive roads and limited to high clearance and four wheel drive vehicles.

Upper reaches of the creek are used by hunters during deer and quail seasons. Fishing is not a common activity in Bonita Creek due to the size of the stream and the species of fish that inhabit it.

Off highway vehicles are limited to using designated roads by the Arizona Desert Wilderness Act of 1990. These roads are identified in the draft Gila Box Riparian National Conservation Area Management Plan.

There are only two developed visitor use facilities in the canyon. The City of Safford maintains a small picnic area on private lands in the lower end of the study area. The Bonita Creek Stone Cabin (Serna Cabin) has been reconstructed and interpreted for public use at the mouth of Bonita Creek. This site offers the public an opportunity to learn about the ranching history of the region.

In response to new recreational developments, visitor use is projected to increase about 2 percent per year from the current level of 15,000 recreational visitor days in 1993 to 22,300 visitor days in 2013.

Traffic on the primitive roads in the Bonita Creek study area is low. Local ranchers, hunters, recreationists and an occasional miner constitute the majority of use.

E. FISH AND WILDLIFE HABITAT VALUES

Bonita Creek provides outstandingly remarkable habitat for native fish and wildlife. The combination of perennial water, riparian vegetation, and adjacent upland habitats supports a remarkably rich fish and wildlife community for the small size of the system.

The habitat is used by three federally listed endangered species, one proposed endangered species, and 16 federally listed candidate species. The federally listed endangered species are the bald eagle (Haliaeetus leucocephalus), peregrine falcon (Falco peregrinus), and reintroduced razorback sucker (Xyrauchen texanus). The one proposed endangered species is the southwestern willow flycatcher (Empidonax traillii extimus). The 16 federally listed candidate species include: the California leaf-nosed bat (Macrotus californicus), southwest cave myotis (Myotis velifer), greater

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

western mastiff-bat (*Eumops perotis californicus*), Goshawk (*Accipiter gentilis*), gactus ferruginous pygmy owl (*Glaucidium brasilianum cactorum*), northern gray hawk (*Buteo nitidus maximus*), loggerhead shrike (*Lanius ludovicianus*), ferruginous hawk (*Buteo regalis*), Arizona toad (*Bufo microscaphus microscaphus*), lowland leopard frog (*Rana yavapaiensis*), Gila chub (*Gila intermedia*), Sonora sucker (*Catostomus insignis*), and desert sucker (*Catostomus clarki*). State listed species include the above, plus five others.

The razorback sucker (*Xyrauchen texanus*), has been reintroduced in the Gila Box. These fish are threatened by habitat alteration and predatory exotic fish species.

Bonita Creek supports populations of two other native and six non-native fish species. The native fish are longfin dace (*Agosia chrysogaster*) and speckled dace (*Rhinichthys osculus*). The non-native fish include channel catfish, yellow bullhead, fathead minnow, red shiner, mosquitofish and common carp.

Bonita Creek supports the greatest native fish biomass (pounds per square yard of water surface) of any stream in the southwest. The aquatic, riparian and uplands in the Bonita Creek study area forms a rich habitat matrix utilized by many native mammals, birds, amphibians and reptiles.

The creek and adjacent uplands are habitat for mule deer (*Odocoileus hemionus*), javellna (*Pecari tajacu*), black bear (*Euarctos americanus*), mountain lion (*Felis concolor*), wild turkey (*Melagris gallopavo*), Gambels quail (*Lophortyx gambelii*), montezuma quail (*Cryotyx montezumae*), white-winged dove (*Zenaida asiatica*), and mourning dove (*Zenaidura macroura*).

Bonita Creek is used at times by a portion of the herd of bighorn sheep that uses the entire Gila Box area.

Large numbers of resident and migratory birds

use the Bonita Creek study area for breeding, migration and wintering. Studies conducted in Bonita Creek found one of the highest diversities of breeding birds ever reported in North America (Hunter 1987). Sixty-two species of breeding birds were identified in Bonita Creek during a study in 1984 (Hunter 1987).

The number of beaver (*Castor canadensis*) in the creek varies with the intensity of flooding and the number of cottonwood and willow trees present.

F. VEGETATION

Approximately 207 acres of riparian vegetation communities found along the 15 miles of this stream provide essential fish and wildlife habitat and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions. These communities include mesquite bosques, mixed broadleaf, and riparian scrub, which are examples of habitat types that have been significantly diminished and degraded in historic times. The riparian area vegetation communities are currently dominated by mesquite associations.

The mesquite bosque community is characterized by large mesquite, with a closed canopy 30 to 45 feet high. A shrub layer may or may not be present. The major grasses are bermuda grass and red brome. This vegetation community covers most of the Bonita Creek riparian zone.

The mixed broadleaf community is well developed in small clumps and strips along the stream. It is characterized by Fremont cottonwood, Arizona walnut, Arizona sycamore, Velvet ash and Goodding willow.

The riparian scrub community is usually composed of a dense stand of narrowleaf shrubs. Dominant species are usually seepwillow, desert willow or burro brush. Other species could include mesquite, catclaw and tamarisk.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

Major species in Bonita Creek include Arizona sycamore (Plantanus wrightii), Fremont cottonwood (Populus fremonti), Velvet ash (Fraxinus velutina), Arizona walnut (Juglans major), Goodding willow (Salix gooddingii), and Bonpland's willow (Salix bonplandiana) in various combinations from pure to mixed stands of three to five species.

Three major upland vegetation types; grassland, mountain shrub and desert shrub, exist in the Bonita Creek study area.

G. CULTURAL RESOURCES

Cultural resources found in Bonita Creek canyon include numerous historic and prehistoric cultural sites including well preserved cliff dwellings, an historic cabin, homesteads, scatters of chipped stone and pottery, isolated locations of arrowheads and other artifacts, rock art (both petroglyphs and pictographs), the proposed National Historic Safford-Morenci Trail, and a variety of other types of sites.

Pueblo Duvol is the largest and best known cliff dwelling in the area. Preliminary archaeological excavations at the site in 1992 uncovered many well preserved Native American artifacts.

Previous uncontrolled visitation at Pueblo Duvol has led to vandalism and degradation of the cliff dwelling. Other smaller cliff dwellings scattered along portions of Bonita Creek canyon are important archaeological resources and deserve similar protective and interpretative treatment.

Many historic sites exist in Bonita Creek. These old homesteads and cabins are found at various locations along the creek. One of these cabins, the Serna cabin at the mouth of Bonita Creek, was reconstructed by Bureau of Land Management in 1991. Many of these sites are in a state of advanced decay.

General Stephen Kearny camped near the mouth of Bonita Creek on his way to California to participate in the Mexican War of 1846. This marked the beginning of the military

operations of the territory acquired from Mexico through the Treaty of Guadalupe Hidalgo. The event and route are commemorated with a monument near the mouth of the creek.

No sites within the study area have been identified by Apaches as traditional cultural properties. Further, no traditional cultural properties or lifeway values have been identified by the Hispanic community in the study area.

The Bonita Creek ethnoecology study was completed in 1993. It investigated the ecological impacts of the various inhabitants of this area from about 1800.

H. WATER RESOURCES

The flow in Bonita Creek is intermittent for short reaches (approximately 1/4 to 1/2 mile) at four locations within the riparian national conservation area.

There are no dams in Bonita Creek. Shallow groundwater removed by the Safford City water supply reduces baseflow in the lower four miles of the creek.

Continuous records of discharge have been collected since 1981 by the United States Geological Survey at their gaging station 6.3 miles upstream from the mouth of Bonita Creek. Maximum discharge during this period was 19,400 cubic feet per second, minimum discharge was 0.66 cubic feet per second, and average discharge was 9.33 cubic feet per second.

Seasonal fluctuations are characteristic with high flow during the winter and after summer thunderstorms and low flow during the late spring and fall. Bonita Creek has a relatively low turbidity and low salinity. Surface water and shallow ground water in Bonita Creek is of such high quality it is recognized as a Unique Water and protected under Arizona state law.

Water rights in the Gila River basin including Bonita Creek are currently undergoing litigation

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

in the state and federal courts. The issue of water rights is controversial and the distinction between state and federal jurisdiction is unclear.

The City of Safford holds a water right for 3.2 million gallons per day on Bonita Creek. Additionally, three permittees hold water rights for cattle watering. Other senior water rights, both state and federal reserved, are located downstream of the confluence of the Gila River and Bonita Creek.

The Bureau of Land Management has applied for an instream flow water right for Bonita Creek of five cubic feet per second through the State of Arizona and acquired a federal reserved water right in the Arizona Desert Wilderness Act. The amount of flow requested in the federal reserved water right will be determined from the results of studies on fish and recreation flow requirements. These rights, even if perfected, are junior to nearly all other water rights in the basin.

Since the Gila River basin is thought to be over-allocated, in all but the wettest years, stream flow in this stream depends on the downstream points of diversion for senior water rights.

The Safford municipal utilities infiltration gallery is about four miles above the mouth of Bonita Creek and removes an average of 3.1 million gallons per day from the shallow groundwater aquifer beneath the creek. This water withdrawal reduces downstream surface flow by about 30 percent to 50 percent during the summer months.

Approximately 75 percent of the Safford City water supply originates in Bonita Creek and provides a water supply for approximately 15,000 Safford area residents. The city established an infiltration gallery in the stream bottom in the 1930s and replaced and modified the system several times in the following decades.

The location of the water collection gallery, in the streambed, and the pipeline, along the

canyon wall, require frequent maintenance.

The city also has well sites on deeded property in the streambed near the reservation boundary. In the past the road has been maintained the entire length of the creek segment.

I. LIVESTOCK GRAZING

Portions of three livestock grazing allotments are in the study area. That portion of the allotment actually in the study area varies by allotment from 3 percent to 12 percent. The actual percentage of the allotment in the study area that is grazed, however, is even lower due to the steep terrain in most allotments.

The Bureau of Land Management emphasis in the study area has been on controlling livestock use in the creek bottom. Allotment management plans have been developed to manage use through grazing systems and riparian pastures. Two of the three allotments are being grazed under rest rotation systems. The Bullgap Allotment is grazed yearlong outside of the riparian pasture.

Fencing projects to control riparian access and the development of water sources in the uplands has been the primary focus of Bureau of Land Management livestock management in the four allotments surrounding Bonita Creek.

The Johnny Creek Allotment (yearlong) covers 23,302 acres and provides for 176 animal units. There are 710 acres in the study area with five animal units. The Bonita Creek allotment has 28,793 acres and 287 animal units. In the study area there are 287 acres and 34 animal units. The Bullgap allotment (yearlong) has 9,036 acres and 104 animal units. In the study area there are 430 acres and five animal units.

The Johnny Creek Allotment is grazed by cattle under a rest rotation grazing system. There is one riparian pasture in the allotment, but it is not included in the rotation system. If cattle wander into the riparian pasture, incidental use is allowed. Only light use of the forage,

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

however, will be permitted. There are no water points in the riparian pasture. A pump and pipeline supplies water for livestock to the tablelands outside the canyon bottom. A second pump and pipeline is planned to provide water to the tablelands to further reduce cattle dependency on Bonita Creek.

The Bonita Creek Allotment is grazed by cattle under a rest rotation system. The allotment has three riparian pastures. Seasonal grazing is permitted in the upper two riparian pastures, but the lower pasture from Lee Trail downstream to

Goat Canyon is not being grazed. Three fenced water points, one in each riparian pasture, provide cattle access to water. In addition to the water points, three pumps and pipelines provide water to cattle in pastures on the tablelands.

The Bullgap Allotment is managed for yearlong use on the uplands outside the canyon. In the grazing system for this allotment, the riparian pasture in the creek bottom is not grazed by cattle. One fenced watering point, however, is provided for livestock in the riparian pasture.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Bonita Creek Wild and Scenic River Study Area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated wild and scenic river. In this case the Gila Box Interdisciplinary Activity Plan will serve as the river management plan.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

The Safford District Resource Management Plan identified fish and wildlife habitat values, riparian, water quality, recreational and cultural resources as outstandingly remarkable in determining that Bonita Creek is eligible for consideration as a wild and scenic river.

The recommended alternative determines 8.1 miles of the Bonita Creek study area to be suitable and recommends it to Congress for inclusion in the National Wild and Scenic River System as Recreational. If designated, its outstandingly remarkable values would receive special long-term legislative protection under the Wild and Scenic Rivers Act.

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Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Bonita Creek provides outstandingly remarkable fish habitat. U.S. Fish and Wildlife Service data indicate six native fish are present in Bonita Creek. This stream supports the greatest native fish biomass (pounds per square yard of water surface) of any stream in the southwest. An additional six species of non-native fish are found in Bonita Creek.

Aquatic habitat suitable for native fish is created and maintained through the interaction of hydrologic forces, soil, riparian vegetation, and geomorphologic processes. Management actions that protect stream flow regimes, maintain or improve water quality, stabilize the stream channel and improve riparian vegetation will maintain or improve aquatic habitat.

Native fish in the southwest are known to suffer negative impacts from the introduction of non-native fish that displace or prey on native species. These invader species are present in the lower reaches of Bonita Creek.

Under the recommended alternative, management actions will reduce grazing impacts on riparian vegetation by excluding eight miles of riparian area and allowing seasonal grazing on the remaining seven miles. They will also reduce the number of destabilizing riparian road miles from 15 to from four to seven, and control recreational developments and use. Legal protection for existing water resources also would be ensured.

Implementation of the draft Gila Box Plan may include the construction of a fish barrier near the mouth of Bonita Creek to control upstream movements of non-native fish. Combined with efforts to reduce exotic fish populations, these actions will benefit native fish populations and protect the outstandingly remarkable fish resource values in the lower reaches of the creek.

Bonita Creek also provides outstandingly remarkable habitat for wildlife. The combination of perennial water, riparian vegetation and adjacent upland habitats forms a rich habitat matrix utilized by many native mammals, birds, amphibians and reptiles. The diversity of breeding birds is one of the greatest recorded in North America. Bonita Creek supports 62 species of breeding birds.

The creek and adjacent uplands are also habitat for mule deer, javelina, black bear, mountain lion, wild turkey, gambels quail, montezuma quail, white-winged dove, and mourning dove. Bonita Creek is populated at times by a herd of bighorn sheep that uses the entire Gila Box area.

The Creek and canyon support three federally-listed endangered species (Bald eagle, Peregrine falcon, Razorback sucker) and 16 candidate species. Also present are five state-listed species that are not federally-listed.

Wildlife in the study area are affected by the quantity and quality of habitat. Under the recommended alternative, management actions will reduce impacts, improve habitat, and protect priority species, including threatened and endangered species. Wildlife are also impacted by direct human disturbance. Actions that increase the number of visitors to the area will likely increase this impact.

Management under the recommended alternative will reduce grazing in the riparian areas by excluding eight miles and limiting the remaining seven miles to seasonal use, reducing the number of miles of riparian roads from 15 to from four to seven, and controlling recreational developments.

Actions that improve access roads, picnic and campground developments, and regional recognition of the area as a conservation area will increase visitation and may lead to wildlife disturbance. However, reducing the number of miles of riparian roads from 15 to from four to seven, increasing visitor education

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opportunities, and locating recreational developments outside of the riparian area will alleviate wildlife disturbances.

• Conclusion

The recommended alternative will have beneficial impacts on fish and wildlife habitat values. Management actions reducing impacts and improving habitat quantity and quality will be beneficial. Increased disturbance levels could cause some adverse impacts. There will be a beneficial impact from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Cultural Resource Values

Cultural resources found in Bonita Creek canyon include numerous historic and prehistoric cultural sites including well preserved cliff dwellings, an historic cabin and the proposed National Historic Safford-Morenci Trail.

Pueblo Duvol is the largest and best known cliff dwelling in the area. Other smaller cliff dwellings scattered along portions of Bonita Creek canyon are important archaeological resources. Historic homesteads and cabins are found at various locations along the creek. Many of these sites are in a state of advanced decay.

Cultural resources in Bonita Creek have been damaged by surface disturbing activities, erosion and vandalism. Prehistoric rock art, cliff dwellings and historic homesteads have been degraded by a combination of these factors.

Under the recommended alternative, cultural resource management will include a combination of inventories, protection, stabilization, and interpretation.

Management actions reducing surface disturbance and stabilizing the riparian area will protect cultural resource values.

Reducing the number of miles of riparian roads from 15 to four to seven, and curtailing grazing in the riparian areas will benefit the cultural resources.

Increased visitor use may increase the incidents of vandalism. However, increases in visitor management activities such as education and interpretation of cultural sites as well as regular patrols will alleviate vandalism problems.

Interpretation and excavations of sites in Bonita Creek will lead to data recovery from sites susceptible to destruction.

• Conclusion

Implementation of the recommended alternative will have beneficial impacts on cultural resources. Reconstruction, stabilization, and interpretation of sites will protect resources and data for the future. Some indirect adverse impacts could occur from increased visitor use of the area. There will be beneficial impact from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Water Quality Values

Surface water and shallow ground water in Bonita Creek is of such high quality it has been designated as a Unique Water and protected under Arizona State law. The flow in Bonita Creek is perennial with intermittent for short reaches (approximately 1/4 to 1/2 mile) at four locations within the riparian national conservation area. Bonita Creek has relatively low turbidity and salinity.

Potential impacts to water quality exist from the introduction of animal and human wastes in the stream and shallow groundwater aquifer. Erosion of unstable banks may increase the sediment load carried by the stream. Modification or removal of the ranch headquarters and septic system at Lee Trail is expected to remove the potential for impacts to

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water quality from this source.

• Conclusion

Implementation of the recommended alternative will curtail livestock use of the riparian area, reduce the number miles of riparian roads, stabilize the remaining roads, modify or remove the septic system and ranch headquarters at Lee Trail, and control recreational developments and activities in the study area. This will lead to beneficial impacts on the existing water quality. There will be beneficial impacts from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Riparian Values

Two hundred seven acres of riparian vegetation communities found along the 15 miles of this stream provide essential habitat and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions. The existing riparian vegetation communities include, mixed broadleaf, riparian scrub, and mesquite bosques.

Riparian values are directly affected by large floods, vegetation clearing, grazing, road building, recreational site developments and activities in and around riparian areas. Riparian values are indirectly affected by channel destabilization, soil compaction, stream flow modification and in some cases water quality degradation.

Implementation of the recommended alternative will prohibit woodcutting in the riparian area, exclude eight miles of the riparian area from livestock grazing and allow only seasonal use on the other seven miles. A reduction in road mileage in the riparian area from 15 to from four to seven will allow revegetation of barren areas and contribute to improved channel stability.

Rerouting the remaining roads and improving maintenance procedures will reduce erosion and improve channel stability in the lower

reaches of the creek. Prohibiting woodcutting in the riparian area will prevent vegetation removal. This action would protect the riparian values. Recreational site developments will be located in the uplands to avoid conflicts with riparian values. Also, trails will be built and maintained in ways that will minimize impacts to vegetation and soil stability. These actions would protect riparian values.

Stream flow and water quality will be maintained or improved by management actions discussed in the water resources and water quality sections.

• Conclusion

Controlling activities that degrade vegetation communities will be beneficial. There will be no adverse impact on riparian values from implementation of the recommended alternative. There will be beneficial impacts from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstanding Remarkable Recreational Values

Recreation in Bonita Creek is affected by ease of access; availability of developments such as campgrounds, picnic areas, and trails; and regional recognition of the area.

The management actions will ensure a variety of recreational opportunities. Dispersed recreational activities such as hiking, bird-watching, sightseeing, horseback riding, camping, and picnicking will be encouraged. Recreational developments will include building or upgrading four picnic areas, constructing two to four trails, building two kiosks, and improving up to 11 roads. Vehicles will be limited to designated roads.

The improved transportation system and increased number of recreational developments will have beneficial impacts on most forms of recreation. The closure of eight to 12 miles of the riparian area to vehicles will have negative

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impacts on the off highway vehicle recreation in the study area.

Currently there are an estimated 15,000 visitor use days. Recent trends combined with proposed recreational developments and improved access have led Bureau of Land Management specialists to conclude that use of the study area is likely to increase by about two percent per year to 22,300 visitor use days by 2013.

By itself the wild and scenic river designation is not expected to lead to a substantial increase in tourism.

However, upward trends in recent visitor use, proposed developments of new recreational sites, improvements in access to the area, and increased public awareness of the area associated with designation of the Gila Box Riparian National Conservation Area, with the addition of a wild and scenic river designation lead Bureau of Land Management specialists to conclude a moderate increase in visitor use of the area can be expected in the foreseeable future.

• Conclusion

Improved access, recreational developments, and increased recognition is expected to have beneficial impacts on most forms of recreation. There will be some negative impacts on off highway vehicle recreation due to limiting that type of use. There will be beneficial impacts from long-term legislative protection under the Wild and Scenic Rivers Act.

Cumulative impacts

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant

actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Bonita Creek study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Safford District Resource Management Plan (1992) and the draft Gila Box Interdisciplinary Activity Plan.

The cumulative impacts to uses and values associated with implementation of the recommended alternative would be negligible due to the regulations and management constraints on these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse impacts

Values found in the area will be protected by the restrictions on activities and protective strategies identified in the recommended alternative, The draft Gila Box Interdisciplinary Activity Plan and the Safford District Resource Management Plan.

There will be no unavoidable adverse impacts associated with the recommended alternative.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

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C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

The Safford District Resource Management Plan identified fish and wildlife habitat values, riparian, water quality, recreational and cultural resources as outstandingly remarkable in determining that Bonita Creek is eligible for consideration as a wild and scenic river.

The all suitable alternative determines 3,570 acres of public land in the Bonita Creek study area suitable and recommends them to Congress for inclusion in the National Wild and Scenic Rivers System for designation as Recreational. If designated, its outstandingly remarkable values would receive special legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Bonita Creek provides outstandingly remarkable fish habitat. U.S. Fish and Wildlife Service data indicates six native fish are present in Bonita Creek. This stream supports the greatest native fish biomass (pounds per square yard of water surface) of any stream in the southwest. An additional six species of non-native fish are found in Bonita Creek.

Aquatic habitat suitable for native fish is created and maintained through the interaction of hydrologic forces, soil, riparian vegetation, and geomorphologic processes. Management actions that protect stream flow regimes, maintain or improve water quality, stabilize the stream channel and improve riparian vegetation will maintain or improve aquatic habitat.

Native fish in the southwest are known to suffer negative impacts from the introduction of non-native fish that displace or prey on native species. These invader species are present in the lower reaches of Bonita Creek.

Under the all suitable alternative, management actions will reduce grazing impacts on riparian vegetation by excluding eight miles of riparian area and allowing seasonal grazing on the remaining seven miles. They will also reduce the number of destabilizing riparian road miles from 15 to from four to seven, and control recreational developments and use. Legal protection for existing water resources also would be ensured.

Bonita Creek also provides outstandingly remarkable habitat for wildlife. The combination of perennial water, riparian vegetation and adjacent upland habitats forms a rich habitat matrix utilized by many native mammals, birds, amphibians and reptiles. The diversity of breeding birds is one of the greatest recorded in North America. Bonita Creek supports 62 species of breeding birds.

The creek and adjacent uplands are also habitat for mule deer, javelina, black bear, mountain lion, wild turkey, gambels quail, montezuma quail, white-winged dove, and mourning dove. Bonita Creek is populated at times by a herd of bighorn sheep that uses the entire Gila Box area.

The Creek and canyon support three federally-listed endangered species (Bald eagle, Peregrine falcon, Razorback sucker) and 16 candidate species. Also present are five state-listed species that are not federally-listed.

Wildlife in the study area are affected by the quantity and quality of habitat. Under the all suitable alternative, management actions will reduce impacts, improve habitat, and protect priority species, including threatened and endangered species. Wildlife are also impacted by direct human disturbance. Actions that increase the number of visitors to the area will likely increase this impact.

Management under the all suitable alternative will reduce grazing in the riparian areas by excluding eight miles and limiting the remaining seven miles to seasonal use, reducing the

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number of miles of riparian roads from 15 to from four to seven, and controlling recreational developments.

Actions that improve access roads, picnic and campground developments, and regional recognition of the area as a conservation area will increase visitation and may lead to wildlife disturbance.

However, reducing the number of miles of riparian roads from 15 to from four to seven, increasing visitor education opportunities, and locating recreational developments outside of the riparian area will alleviate wildlife disturbances.

• Conclusion

The all suitable alternative will have beneficial impacts on fish and wildlife habitat values. Management actions reducing impacts and improving habitat quantity and quality will be beneficial. Increased disturbance levels could cause some adverse impacts. There will be beneficial impact from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Cultural Resource Values

Cultural resources found in Bonita Creek canyon include numerous historic and prehistoric cultural sites including well preserved cliff dwellings, an historic cabin and the proposed National Historic Safford-Morenci Trail.

Pueblo Duvol is the largest and best known cliff dwelling in the area. Other smaller cliff dwellings scattered along portions of Bonita Creek canyon are important archaeological resources. Historic homesteads and cabins are found at various locations along the creek. Many of these sites are in a state of advanced decay.

Cultural resources in Bonita Creek have been

damaged by surface disturbing activities, erosion and vandalism. Prehistoric rock art, cliff dwellings and historic homesteads have been degraded by a combination of these factors.

Under the all suitable alternative, cultural resource management will include a combination of inventories, protection, stabilization, and interpretation.

Management actions reducing surface disturbance and stabilizing the riparian area will protect cultural resource values.

Reducing the number of miles of riparian roads from 15 to from four to seven, and curtailing grazing in the riparian areas will benefit the cultural resources.

Increased visitor use may increase the incidents of vandalism. However, increases in visitor management activities such as education and interpretation of cultural sites as well as regular patrols will alleviate vandalism problems.

Interpretation and excavations of sites in Bonita Creek will lead to data recovery from sites susceptible to destruction.

• Conclusion

Implementation of the all suitable alternative will have beneficial impacts on cultural resources. Reconstruction, stabilization, and interpretation of sites will protect resources and data for the future. Some indirect adverse impacts could occur from increased visitor use of the area. There will be beneficial impact from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Water Quality Values

Surface water and shallow ground water in Bonita Creek is of such high quality it has been designated as a Unique Water and protected under Arizona State law. The flow in Bonita Creek is perennial with intermittent for short

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reaches (approximately 1/4 to 1/2 mile) at four locations within the riparian national conservation area. Bonita Creek has relatively low turbidity and salinity.

Potential impacts to water quality exist from the introduction of animal and human wastes in the stream and shallow groundwater aquifer. Erosion of unstable banks may increase the sediment load carried by the stream.

Modification or removal of the ranch headquarters and septic system at Lee Trail is expected to remove the potential for impacts to water quality from this source.

• Conclusion

Implementation of the all suitable alternative will curtail livestock use of the riparian area, reduce the number miles of riparian roads, stabilize the remaining roads, modify or remove the septic system and ranch headquarters at Lee Trail, and control recreational developments and activities in the study area. This will lead to beneficial impacts on the existing water quality. There will be beneficial impacts from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Riparian Values

Approximately 207 acres of riparian vegetation communities found along the 15 miles of this stream provide essential habitat and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions. The existing riparian vegetation communities include mixed broadleaf, riparian scrub, and mesquite bosques.

Riparian values are directly affected by large floods, vegetation clearing, grazing, road building, recreational site developments and activities in and around riparian areas. Riparian values are indirectly affected by channel destabilization, soil compaction, stream flow modification and in some cases water quality

degradation.

Implementation of the all suitable alternative will prohibit woodcutting in the riparian area, exclude eight miles of the riparian area from livestock grazing and allow only seasonal use on the other seven miles. A reduction in road mileage in the riparian area from 15 to from four to seven will allow revegetation of barren areas and contribute to improved channel stability.

Rerouting the remaining roads and improving maintenance procedures will reduce erosion and improve channel stability in the lower reaches of the creek. Prohibiting woodcutting in the riparian area will prevent vegetation removal. This action would protect the riparian values.

Recreational site developments will be located in the uplands to avoid conflicts with riparian values. Also, trails will be built and maintained in ways that will minimize impacts to vegetation and soil stability. These actions would protect riparian values.

Stream flow and water quality will be maintained or improved by management actions discussed in the water resources and water quality sections.

• Conclusion

Controlling activities that degrade vegetation communities will be beneficial. There will be no adverse impact on riparian values from implementation of the all suitable alternative. There will be beneficial impacts from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstanding Remarkable Recreational Values

Recreation in Bonita Creek is affected by ease of access; availability of developments such as campgrounds, picnic areas, and trails; and regional recognition of the area.

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The management actions will ensure a variety of recreational opportunities. Dispersed recreational activities such as hiking, bird-watching, sightseeing, horseback riding, camping, and picnicking will be encouraged. Recreational developments will include building or upgrading four picnic areas, constructing two to four trails, building two kiosks, and improving up to 11 roads. Vehicles will be limited to designated roads.

The improved transportation system and increased number of recreational developments will have beneficial impacts on most forms of recreation. The closure of eight to 12 miles of the riparian area to vehicles will have negative impacts on the off highway vehicle recreation in the study area.

Currently there are an estimated 15,000 visitor use days. Recent trends combined with proposed recreational developments and improved access have led Bureau of Land Management specialists to conclude that use of the study area is likely to increase by about two percent per year to 22,300 visitor use days by 2013.

By itself the wild and scenic river designation is not expected to lead to a substantial increase in tourism.

However, upward trends in recent visitor use, proposed developments of new recreational sites, improvements in access to the area, and increased public awareness of the area associated with designation of the Gila Box Riparian National Conservation Area, with the addition of a wild and scenic river designation lead Bureau of Land Management specialists to conclude a moderate increase in visitor use of the area can be expected in the foreseeable future.

. Conclusion

Improved access, recreational developments, and increased recognition is expected to have beneficial impacts on most forms of recreation

under the all suitable alternative. There will be some negative impacts on off highway vehicle recreation due to limiting that type of use. There will be beneficial impacts from long-term legislative protection under the Wild and Scenic Rivers Act.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

The Safford District Resource Management Plan identified fish and wildlife habitat values, riparian, water quality, recreational and cultural resources as outstandingly remarkable in determining that Bonita Creek is eligible for consideration as a wild and scenic river.

Under the no action alternative, the Bonita Creek study area would not be recommended to Congress for designation for inclusion in the National Wild and Scenic River System as Recreational. Its outstandingly remarkable values would not receive special long-term legislative protection under the Wild and Scenic Rivers Act.

However, ongoing management actions associated with the Gila Box Riparian National Conservation Area would provide legislative protection.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Bonita Creek provides outstandingly remarkable fish habitat. U.S. Fish and Wildlife Service data indicates six native fish are present in Bonita Creek. This stream supports the greatest native fish biomass (pounds per square yard of water surface) of any stream in the southwest. An additional six species of non-native fish are found in Bonita Creek.

Aquatic habitat suitable for native fish is created and maintained through the interaction of hydrologic forces, soil, riparian vegetation, and

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geomorphologic processes. Management actions that protect stream flow regimes, maintain or improve water quality, stabilize the stream channel and improve riparian vegetation will maintain or improve aquatic habitat.

Native fish in the southwest are known to suffer negative impacts from the introduction of non-native fish that displace or prey on native species. These invader species are present in the lower reaches of Bonita Creek.

Under the no action alternative, management actions will reduce grazing impacts on riparian vegetation by excluding eight miles of riparian area and allowing seasonal grazing on the remaining seven miles. They will also reduce the number of destabilizing riparian road miles from 15 to from four to seven, and control recreational developments and use. Legal protection for existing water resources also would be ensured.

Implementation of the draft Gila Box Plan may include the construction of a fish barrier near the mouth of Bonita Creek to control upstream movements of non-native fish. Combined with efforts to reduce exotic fish populations, these actions will benefit native fish populations and protect the outstandingly remarkable fish resource values in the lower reaches of the creek.

Bonita Creek also provides outstandingly remarkable habitat for wildlife. The combination of perennial water, riparian vegetation and adjacent upland habitats forms a rich habitat matrix utilized by many native mammals, birds, amphibians and reptiles.

The diversity of breeding birds is one of the greatest recorded in North America. Bonita Creek supports 62 species of breeding birds.

The creek and adjacent uplands are also habitat for mule deer, javelina, black bear, mountain lion, wild turkey, gambels quail, montezuma quail, white-winged dove, and mourning dove. Bonita Creek is populated at times by a herd of

bighorn sheep that uses the entire Gila Box area. The Creek and canyon support three federally-listed endangered species (Bald eagle, Peregrine falcon, Razorback sucker) and 16 candidate species. Also present are five state-listed species that are not federally-listed.

Wildlife in the study area are affected by the quantity and quality of habitat. Under the no action alternative, management actions that will reduce impacts, improve habitat, and protect priority species, including threatened and endangered species. Wildlife are also impacted by direct human disturbance. Actions that increase the number of visitors to the area will likely increase this impact.

Under the no action alternative the outstandingly remarkable cultural resource values would receive protection from the ongoing management actions identified in Chapter II. For example, these include actions to reduce grazing in the riparian areas by excluding eight miles and limiting the remaining seven miles to seasonal use, reducing the number of miles of riparian roads from 15 to from four to seven, and controlling recreational developments.

Actions that improve access roads, picnic and campground developments, and regional recognition of the area as a conservation area will increase visitation and may lead to wildlife disturbance.

However, reducing the number of miles of riparian roads from 15 to from four to seven, increasing visitor education opportunities, and locating recreational developments outside of the riparian area will alleviate wildlife disturbances.

• Conclusion

The no action alternative will have no direct adverse impacts on fish and wildlife habitat values. Management actions reducing impacts and improving habitat quantity and quality will be beneficial. Increased disturbance levels

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could cause some adverse impacts. There will be no long-term legislative protection under the Wild and Scenic Rivers Act. However, the values would be protected by ongoing management.

Impacts on Outstandingly Remarkable Cultural Resource Values

Cultural resources found in Bonita Creek canyon include numerous historic and prehistoric cultural sites including well preserved cliff dwellings, an historic cabin and the proposed National Historic Safford-Morenci Trail.

Pueblo Duvol is the largest and best known cliff dwelling in the area. Other smaller cliff dwellings scattered along portions of Bonita Creek canyon are important archaeological resources. Historic homesteads and cabins are found at various locations along the creek. Many of these sites are in a state of advanced decay.

Cultural resources in Bonita Creek have been damaged by surface disturbing activities, erosion and vandalism. Prehistoric rock art, cliff dwellings and historic homesteads have been degraded by a combination of these factors.

Under the no action alternative the outstandingly remarkable cultural resource values would receive protection from the ongoing management actions identified in Chapter II. For example, these include a combination of inventories, protection, stabilization, and interpretation.

Management actions reducing surface disturbance and stabilizing the riparian area will protect cultural resource values.

Reducing the number of miles of riparian roads from 15 to from four to seven, and curtailing grazing in the riparian areas will benefit the cultural resources.

Increased visitor use may increase the incidents

of vandalism. However, increases in visitor management activities such as education and interpretation of cultural sites as well as regular patrols will alleviate vandalism problems.

Interpretation and excavations of sites in Bonita Creek will lead to data recovery from sites susceptible to destruction.

• Conclusion

Implementation of the no action alternative will not have adverse impacts on cultural resources. While there will be no long-term legislative protection under the Wild and Scenic Rivers Act, the values would be protected by ongoing management.

Impacts on Outstandingly Remarkable Water Quality Values

Surface water and shallow ground water in Bonita Creek is of such high quality it has been designated as a Unique Water and protected under Arizona State law. The flow in Bonita Creek is intermittent for short reaches (approximately 1/4 to 1/2 mile) at four locations within the riparian national conservation area. Bonita Creek has relatively low turbidity and salinity.

Potential impacts to water quality exist from the introduction of animal and human wastes in the stream and shallow groundwater aquifer. Erosion of unstable banks may increase the sediment load carried by the stream.

Under the no action alternative the outstandingly remarkable water quality values would receive protection from the ongoing management actions identified in Chapter II. For example, these include modification or removal of the ranch headquarters and septic system at Lee Trail. This is expected to remove the potential for impacts to water quality from this source.

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- Conclusion

Implementation of the no action alternative will not alter current water quality values. Protection of the value would be provided by legislation under the Riparian National Conservation Area.

Impacts on Outstandingly Remarkable Riparian Values

Two hundred seven acres of riparian vegetation communities found along the 15 miles of this stream provide essential habitat and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions. The existing riparian vegetation communities include mixed broadleaf, riparian scrub, and mesquite bosques.

Riparian values are directly affected by large floods, vegetation clearing, grazing, road building, recreational site developments and activities in and around riparian areas. Riparian values are indirectly affected by channel destabilization, soil compaction, stream flow modification and in some cases water quality degradation.

Under the no action alternative the outstandingly remarkable riparian values would receive protection from the ongoing management actions identified in Chapter II. For example, these would prohibit woodcutting in the riparian area, exclude eight miles of the riparian area from livestock grazing and allow only seasonal use on the other seven miles. A reduction in road mileage in the riparian area from 15 to from four to seven will allow revegetation of barren areas and contribute to improved channel stability.

Rerouting the remaining roads and improving maintenance procedures will reduce erosion and improve channel stability in the lower reaches of the creek. Prohibiting woodcutting in the riparian area will prevent vegetation removal. This action would protect the riparian values.

Recreational site developments will be located in the uplands to avoid conflicts with riparian values. Also, trails will be built and maintained in ways that will minimize impacts to vegetation and soil stability. These actions would protect riparian values.

Stream flow and water quality will be maintained or improved by management actions discussed in the water resources and water quality sections.

- Conclusion

Implementation of the no action alternative would have no adverse effects on outstandingly remarkable riparian values. Protection of the values would be provided by the ongoing management actions under the Riparian National Conservation Area.

Impacts on Outstanding Remarkable Recreational Values

Recreation in Bonita Creek is affected by ease of access; availability of developments such as campgrounds, picnic areas, and trails; and regional recognition of the area.

Under the no action alternative the outstandingly remarkable recreational values would receive protection from the ongoing management actions identified in Chapter II. For example, these will ensure a variety of recreational opportunities. Dispersed recreational activities such as hiking, bird-watching, sightseeing, horseback riding, camping, and picnicking will be encouraged. Recreational developments will include building or upgrading four picnic areas, constructing two to four trails, building two kiosks, and improving up to 11 roads. Vehicles will be limited to designated roads.

The improved transportation system and increased number of recreational developments will have beneficial impacts on most forms of recreation. The closure of eight to 12 miles of

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

the riparian area to vehicles will have negative impacts on the off highway vehicle recreation in the study area.

Currently there are an estimated 15,000 visitor use days. Recent trends combined with proposed recreational developments and improved access have led Bureau of Land Management specialists to conclude that use of the study area is likely to increase by about 2 percent per year to 22,300 visitor use days by 2013.

Conclusion

Implementation of the no action alternative would have no adverse effects on outstandingly remarkable riparian values. Protection of the values would be provided by the ongoing management actions under the riparian national conservation area.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Bonita Creek Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that Bonita Creek was eligible for further wild and scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Gila Resource Area Office, Safford, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Bonita Creek Wild and Scenic Study Area were held in Tucson on April 13, 1993, Phoenix April 14, 1993, and Safford, April 20, 1993. Thirty-five to 40 signed the register at the Tucson meeting. Fifty-five to 60 people attended the Phoenix meeting, and about 50 attended the meeting in Safford.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shivwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermillion Resource Area.

B. Smith, Renewable Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson acted as project manager.

BONITA CREEK WILD AND SCENIC RIVER STUDY AREA

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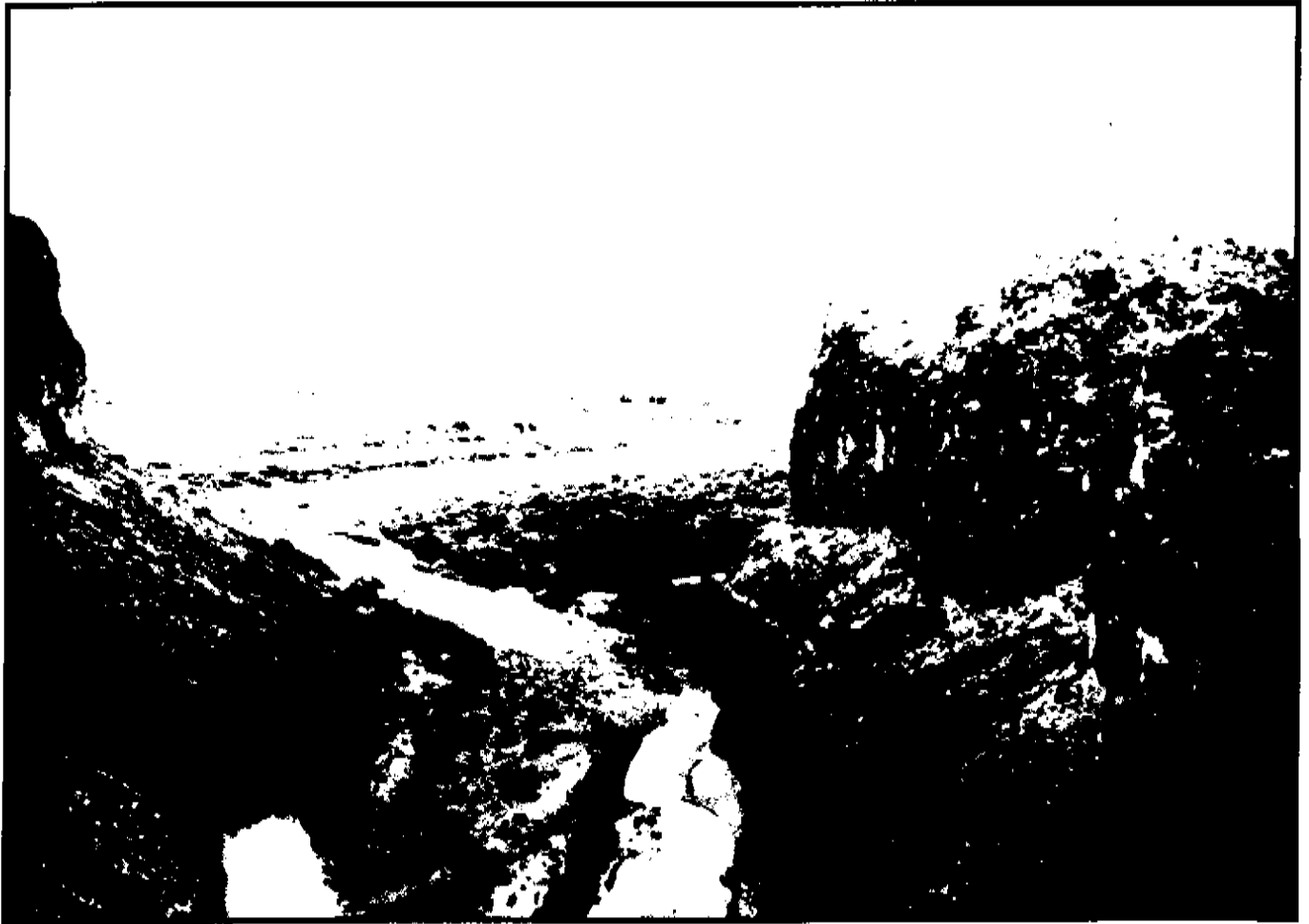
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**BURRO CREEK
WILD AND SCENIC RIVER STUDY AREA**

**KINGMAN RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

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BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Burro Creek were identified in the Kingman Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of Burro Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Burro Creek Wild and Scenic River Study Area is in Mohave and Yavapai counties, Arizona. The study corridor extends from Scratch Canyon, approximately 20 miles north-northeast of the town of Bagdad, southwest to the creek's confluence with the Big Sandy River. The area is accessible from Phoenix and Kingman via Highway 93, which bridges a spectacular canyon near the Bureau of Land Management's Burro Creek Recreation Site, located 15 miles southeast of the town of Wickenburg.

The river study area comprises a corridor of 51.6 miles containing 15,650 acres, 60 percent of it public land (Map BC-1). The study area is in the Kingman Resource Area of the Phoenix District. The creek passes through public land, including the Upper Burro Creek Wilderness Area, state land, and private holdings.

Burro Creek is perennial with intermittent reaches. The study area ranges in elevation from 1,600 to 4,400 feet. The geologic setting is primarily older granitic rock overlain by quaternary volcanic deposits of basalt. In its upper reaches, the creek traverses mesa-

canyon country within the Central Mountains Physiographic Province. Chaparral is the dominant vegetation in this zone.

Downstream within the Basin and Range Physiographic Province, Burro Creek passes through the foothills of the Aquarius Mountains and the northern periphery of the Arizona Upland Zone of the Sonoran Desert.

Burro Creek drains Goodwin Mesa, Bozarth Mesa, and the Aquarius Mountains and feeds into the Big Sandy River, a major tributary of the Bill Williams River. Livestock grazing and mining are major land uses in this region.

Burro Creek was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the Kingman Resource Management Plan (1993). The creek is free-flowing and has outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

The Burro Creek study area consists of five river segments, each with distinct characteristics and values.

Starting at the northern end of the study area, segment 1 extends for 13.5 miles from Scratch Canyon to the boundary of the Upper Burro Creek Wilderness Area. Approximately 29 percent of this segment is under Bureau of Land Management jurisdiction, with state land predominant. This segment was tentatively classified as Wild in the Kingman Resource Management Plan.

Segment 2 covers a distance of 8.5 miles through public land in the Upper Burro Creek Wilderness Area. This segment was tentatively classified as Wild in the Kingman Resource Management Plan.

Segment 3, 29 percent of which is under Bureau of Land Management jurisdiction, reaches for 7.1 miles from the wilderness area boundary to

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Six-Mile Crossing. Private land constitutes 48 percent of this area. Segment 3 was tentatively classified as Recreational in the Kingman Resource Management Plan.

Segment 4, coursing nine miles entirely through public land, extends from Six-Mile Crossing to Highway 93. This segment was

tentatively classified as Wild in the Kingman Resource Management Plan.

Segment 5 incorporates a distance of 13.5 miles from Highway 93 to the Big Sandy River confluence, with 57 percent of the corridor under Bureau of Land Management jurisdiction and the rest on private land. Segment 5 was tentatively classified as Scenic in the Kingman Resource Management Plan.

**TABLE BC-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

BURRO CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	31.4	9.4	10.8	51.6
PERCENT	60.9	18.2	20.9	100.0
TOTAL ACRES	9,460	2,840	3,350	15,650
PERCENT	60.5	18.1	21.4	100.0

C. INTERRELATIONSHIPS

1. Bureau of Land Management

Segment 2 flows through the Upper Burro Creek Wilderness Area, rich in scenic, recreational, wildlife, and cultural resources. Although remote from urban areas, it is widely recognized throughout Arizona as a premier wilderness by virtue of its distinctive landforms, pristine character, and abundant raptors and other wildlife.

The perennial creek runs the eastern length of the wilderness through a broad, but deeply incised, canyon. Upper Burro Creek is used for scientific studies and educational programs by government agencies, universities, and conservation groups throughout Arizona.

A wilderness management plan to provide guidance for the Upper Burro Creek Wilderness Area is scheduled for completion in 1996.

The Burro Creek Riparian and Cultural Area of

Critical Environmental Concern, designated in the Kingman Resource Management Plan, incorporates nearly all of the public land in the Burro Creek study area outside of the Upper Burro Creek Wilderness. The area of critical environmental concern was established to protect and enhance riparian habitat, threatened and endangered species, cultural resources, and water quality through ecosystem management.

Segment 3, between the Upper Burro Creek Wilderness Area and Six-Mile Crossing, has a high proportion of state and private land and is not part of the area of critical environmental concern.

The Burro Creek Recreation Site, located near the junction of Highway 93 and the spectacular Burro Creek Canyon, is one of four developed campgrounds in the Kingman Resource Area. It provides facilities for campers and recreational vehicles.

Lands along lower Burro Creek are in the Big

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Sandy Herd Management Area for wild burros, one of three herd management areas in the

Kingman Resource Area. The Herd Management Area Plan guides management of burros and their habitat. Excess animals are captured and offered for public adoption.

**TABLE BC-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE BURRO CREEK
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

BURRO CREEK STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Upper Burro Creek Wilderness Area	3,223	20.1
Burro Creek Riparian and Cultural Area of Critical Environmental Concern	4,933	31.5

2. Department of Interior

The U.S. Fish and Wildlife Service and the U.S. Geological Survey are among the agencies and organizations that have participated in scientific studies of the natural resources in the Burro Creek study area. The Bureau of Land Management is a partner in the Bald Eagle Nest Watch Program administered by the U.S. Fish and Wildlife Service. The U.S. Geological Survey operates and maintains a stream gauge located 15 miles upstream from the confluence with the Big Sandy River.

3. Other Federal Agencies

The Prescott National Forest manages the upper watersheds of Pine Creek and Boulder Creek, two major tributaries of Burro Creek.

4. State of Arizona

Much of the northernmost segment of Burro Creek traverses state land, and the Arizona State Land Department manages a significant portion of the upper watershed.

In addition, the Bureau of Land Management has cooperated with several state agencies in the course of resource management along

Burro Creek.

The State of Arizona has designated Burro Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18, Chapter 11, 1992). Streams designated as Unique Waters have excellent water quality and are characterized by exceptional recreational or ecological significance, or because they provide critical habitat for threatened or endangered species. The state sets water quality standards that apply to designated unique waters.

In 1983, the Bureau of Land Management contracted with the Arizona Department of Health Services for a baseline water quality study. The Bureau of Land Management has a Unique Waters compliance monitoring program on Burro Creek.

The Bureau of Land Management and the Arizona Game and Fish Department cooperate in the management of wildlife habitat surrounding Burro Creek. Specific projects include the development of a management plan for pronghorn on Goodwin Mesa and the introduction of javelina into the Burro Creek drainage.

The Arizona Department of Transportation is

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

working with the Bureau of Land Management in conjunction with the planned reconstruction and widening of Highway 93. The project may result in improved access to the Burro Creek Campground.

5. Local Governments

The Burro Creek study area is in Mohave and Yavapai Counties.

6. Private

The town of Bagdad is situated nine miles east of segment 3 of the river study area. Its population of approximately 2,000 people provides the labor force for the large open pit mine operated by the Cyprus Bagdad Copper Corporation. Roads, a power line, and pipelines that serve the community and the mine cross Burro Creek in segment 3 between Boulder Creek and Six-Mile Crossing.

Due to the high proportion of state and private land along the central segment of Burro Creek, the Kingman Resource Management Plan excludes that area from the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

The headwaters of Burro Creek are located in the Luis Maria Baca Float, a Spanish land grant.

D. SCOPING

Scoping meetings specifically highlighting the Burro Creek study area were held in Bagdad on April 5, 1993, in Kingman on April 6, 1993, and in Phoenix on April 14, 1993. Approximately 100 people attended the Bagdad meeting, 15 to 20 the Kingman meeting, and 55 to 60 were at the Phoenix meeting.

The issues raised concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the river study area, as well as the effects of existing and potential land and

water uses on wild and scenic river values.

Scoping Issues

- Impacts on use of private property
- Impacts on water rights
- Impacts on existing utility lines operated by Arizona Electric Power Cooperative, Inc. and Citizens Utilities
- Impacts on livestock grazing
- Impacts on federally-listed or candidate fish and wildlife species
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable recreational values
- Impacts on outstandingly remarkable fish and wildlife habitat
- Impacts on outstandingly remarkable cultural resource values
- Impacts on water quality
- Impacts on mineral development and on operation of the Cyprus Bagdad Mine
- Impacts on the economic base and stability of Bagdad

Issues Considered but Not Selected for Further Analysis

- Impacts on use of private property

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

- Impacts on water rights

A federal reserved water right was created for that portion of Burro Creek in the Upper Burro Creek Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right is ongoing and notification would be given to the State of Arizona.

The Bureau of Land Management submitted an application to the State of Arizona in 1984 (No. 33-89119) for instream flow on Francis and Burro Creeks for wildlife, fisheries, and recreation purposes. This application is being amended to include two separate assessments, one for the Francis Creek portion and one for the public land reaches of Burro Creek.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further.

- Impacts on existing utility lines operated by

Arizona Electric Power Cooperative, Inc. and Citizens Utilities.

Operation and maintenance of existing facilities would continue without change under all alternatives. New utility lines would be discouraged, but additional facilities could be constructed in existing rights-of-ways where no reasonable alternative exists. The construction of new power lines would be permitted in existing utility corridors. Environmental analyses would be necessary to assess potential impacts and develop mitigation measures for any decision resulting in adverse impacts to outstandingly remarkable resource values.

There would be no impact on existing utility lines. This issue will not be discussed further.

- Impacts on livestock grazing

Current grazing management would continue under the objectives established in the Kingman Resource Management Plan. In segments designated as wild or scenic, livestock grazing levels would be restricted to the extent practiced prior to designation. This restriction would not apply to segments designated as recreational.

Ongoing management actions have the objective of improving currently unsatisfactory conditions, while protecting natural resource values, on all of the grazing allotments along Burro Creek. Therefore, increases in livestock grazing levels would be inconsistent with this management objective.

There would be no impact on livestock grazing from implementation of the alternatives defined in Chapter II.

This issue will not be discussed further.

- Impacts on federally-listed or candidate fish and wildlife species

The Endangered Species Act requires the

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species.

Impacts on federally-listed or candidate species will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft environmental impact statement to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Burro Creek study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation.

These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative
All suitable
No action

B. RECOMMENDED ALTERNATIVE

The recommended alternative consists of the following:

Segment 1, 13.5 miles long (4,080 acres): 2.2 miles are determined suitable and recommended for designation as Wild; the remaining 11.3 miles are determined nonsuitable and not recommended;

Segment 2, 8.5 miles long (2,750 acres): determined suitable and recommended for designation as Wild;

Segment 3, 7.1 miles (2,210 acres): determined to be nonsuitable and not recommended for designation;

Segment 4, 9 miles (2,630 acres): determined suitable and recommended for designation as Wild;

Segment 5, 11.4 miles long (3,980 acres): 5.5 miles is determined suitable and recommended for designation as Wild; the remaining 5.9 miles is determined to be nonsuitable and is not recommended to Congress for inclusion in the National Wild and Scenic Rivers System.

Management in the study area's 3,223-acre portion of the Upper Burro Creek Wilderness Area (all of segment 2 and small portions of segments 1 and 3) would comply with the provisions of the Wilderness Act and Bureau of Land Management Manual 8560 regarding wilderness management.

Thirty-two percent (4,933 acres) of the study area is in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and would be managed under the provisions of the area of critical environmental concern.

Wild and Scenic River management actions

Wild and scenic river designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following would be initiated for river segments designated as Wild. Where there might be overlap with ongoing actions, the more stringent action would apply.

- Public lands would be withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), which are conducted under the

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

authority of the General Mining Law of 1872.

- Mining patents would be restricted to the mineral estate and not the surface estate.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate route exists, additional or new facilities would be restricted to existing rights-of-way.
- Construction of new roads or trails for motorized travel would be prohibited.
- Normally, motorized use would be restricted except for search and rescue and other emergency situations.
- Campgrounds, interpretive centers, or administrative headquarters in the river corridor would be prohibited. Simple comfort and convenience facilities could be permitted.
- Recreation use would be encouraged in Wild river areas but public use and access could be regulated.
- Woodcutting would not be permitted except when needed to clear trails, for visitor safety or to control fire.
- Hydroelectric power facilities would be prohibited. No new flood control dams, levees, or other works would be permitted. All water supply dams and major diversions would be prohibited.
- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable values.
- Water quality would be maintained or improved.
- Livestock grazing use would be restricted to current levels.

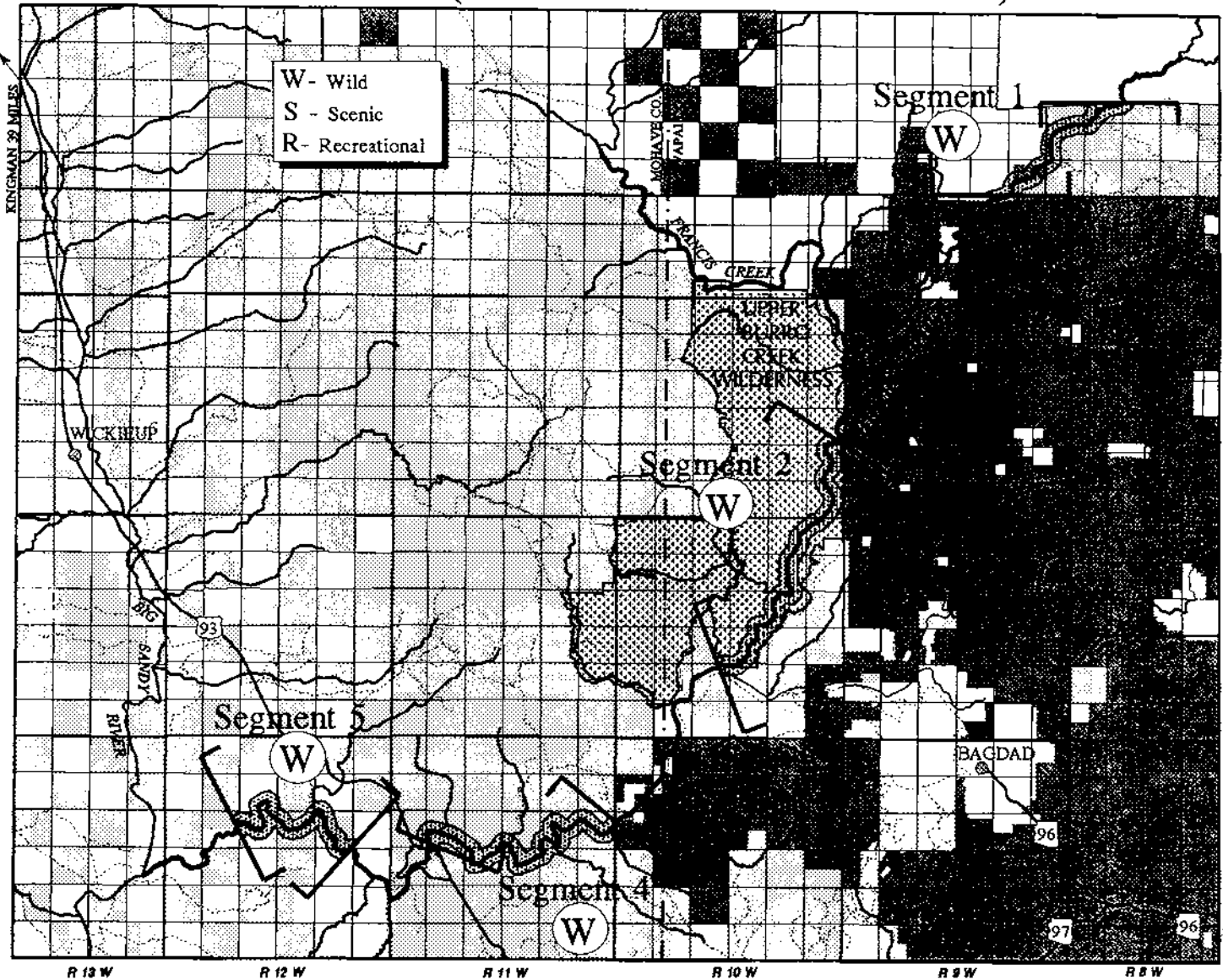
Ongoing management actions

Ongoing management actions in the Burro Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Upper Burro Creek Wilderness Area Management Plan, Kingman Resource Management Plan, and Burro Creek Riparian and Cultural Area of Critical Environmental Concern Plan.

- The 3,223 acres of the study area in the Upper Burro Creek Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights. Approved mining plans of operations would be required for all operations above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Motorized travel is prohibited on 3,223 acres in the Upper Burro Creek Wilderness Area, subject to valid existing rights.
- New road development would be prohibited within 1/2 mile of any bald eagle nest.
- Off-highway vehicle use would be limited to existing roads and trails on 1,300 acres outside the wilderness and the area of critical environmental concern.
- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/2 mile of any bald eagle nest during breeding season from January 1 to June 1.
- Campground development would be restricted to areas outside the riparian zone, the 100-year flood plain, and river segments designated as Wild.
- Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.

BURRO CREEK

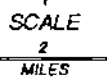
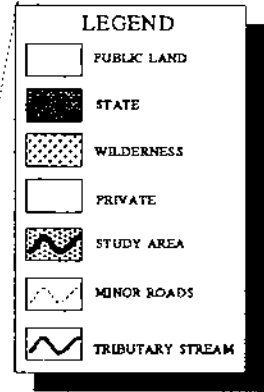
(Recommended Alternative)



W - Wild
S - Scenic
R - Recreational



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA

October 1994

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

- The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
- Black hawk breeding activities would be monitored.
- Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
- An all-aged stand of key native trees, shrubs, and grasses would be promoted.
- Removal of native plants would be prohibited except for salvage operations.
- The Riparian Area Condition Evaluation Inventory would continue.
- Water quality would be regularly monitored to determine compliance with state standards established for streams designated as Unique Waters.
- Formal notification of the federal reserved water right established at the time of designation of the Upper Burro Creek Wilderness Area would be made to the Arizona Department of Water Resources.
- New major utility corridors would be prohibited.
- Efforts would be made to acquire up to 280 acres of non-federal mineral estate under public land on a willing seller-willing buyer basis.
- Efforts would be made to acquire up to 6,042 acres of state and private land on a willing seller-willing buyer basis or by exchange.
- Efforts would be made to initiate development of a Cooperative Management Agreement with the Cyprus Bagdad Corporation and Byner Cattle Company to manage the 7.1 miles of riparian land in segment 3.
- Livestock grazing would be managed to

protect aquatic, riparian, and wildlife resources by constructing enclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.

- Desired plant community descriptions would be developed and incorporated into allotment management plans and herd management area plans.
- Grazing intensity would be reduced to allow use only during the winter non-growing season on the Bagdad Allotment in segment 3.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- Selected areas along Burro Creek would be inventoried, with cultural resource project plans prepared for specific sites.
- Protection measures, such as fencing or periodic patrolling, would be developed for specific cultural resources that have either a high level of significance or a history of vandalism.

Approximately 1,300 acres outside the wilderness area and the area of critical environmental concern would be recommended as not suitable. These acres would remain open to mineral entry, leasing, and material

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

disposals in accordance with the Kingman Resource Management Plan.

On these 1,300 acres, mining plans of operations would be required for all operations exceeding the disturbance level of five acres.

For the segments recommended as not suitable, the following management prescriptions would apply to 673 acres in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, as discussed in the Kingman Resource Management Plan.

- The 673 acres would be withdrawn from new mineral entry, subject to valid existing rights.
- Approved mining plans of operations would be required for all operations above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mineral material disposals of saleable sand, gravel, and related deposits would be prohibited.
- The Bureau of Land Management would stipulate no surface occupancy for mineral leases.
- Off-highway vehicle use would be limited to designated roads and trails.

Local Population and Economy

There are no management actions in the recommended alternative that directly address the local population and economy.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that all of the five segments of Burro Creek are suitable and recommends them to Congress for inclusion in the National Wild and Scenic Rivers System as follows:

Segment 1 (13.5 miles) as Wild

Segment 2 (8.5 miles) as Wild

Segment 3 (7.1 miles) as Recreational

Segment 4 (9.0 miles) as Wild

Segment 5 (13.5 miles) as Scenic.

River management in the study area's 3,223-acre portion of the Upper Burro Creek Wilderness Area (all of segment 2 and small portions of segments 1 and 3) would comply with the provisions of the Wilderness Act and the Upper Burro Creek Wilderness Management Plan.

Thirty-two percent (4,933 acres) of the study area is in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and would be managed under the provisions of the area of critical environmental concern plan.

The following summarizes selected management actions.

Wild and Scenic River management actions

Wild and scenic river designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would be initiated for a wild and scenic river designation. Where there might be overlap with ongoing actions, the more stringent action would apply.

- In Wild segments, public lands would be withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- In Scenic and Recreational segments, new mining claims and mineral leases would be allowed.
- Approved plans of operations would be required for all mining related activities, above

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

the level of casual use as defined at 43 CFR 3809.0-5(b).

- Mining patents would be restricted to the mineral estate and not the surface estate.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate route exists, additional or new facilities would be restricted to existing rights-of-way.
- Construction of new roads or trails for motorized travel would be prohibited in Wild segments. In Scenic and Recreational segments, roads and trails would be allowed.
- Normally, motorized use would be restricted in Wild segments except for search and rescue and other emergency situations. In Scenic and Recreational segments, motorized travel would be permitted if there was no degradation of outstandingly remarkable values.
- Campgrounds, interpretive centers, or administrative headquarters in the river corridor would be prohibited in Wild segments. Simple comfort and convenience facilities could be permitted. Campgrounds, interpretive centers, or administrative headquarters would be permitted in Scenic and Recreational segments.
- Recreation use would be encouraged in Wild river areas but public use and access could be regulated.
- Woodcutting would not be permitted in Wild segments except when needed to clear trails, for visitor safety or to control fire. In Scenic and Recreational segments, woodcutting would be allowed. Cutting of dead and down wood would be limited.
- Hydroelectric power facilities would be prohibited. No new flood control dams, levees, or other works would be permitted. All water supply dams and major diversions would be prohibited.

- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable values.
- Water quality would be maintained or improved.
- Livestock grazing use would be restricted to current levels in Wild and Scenic segments.

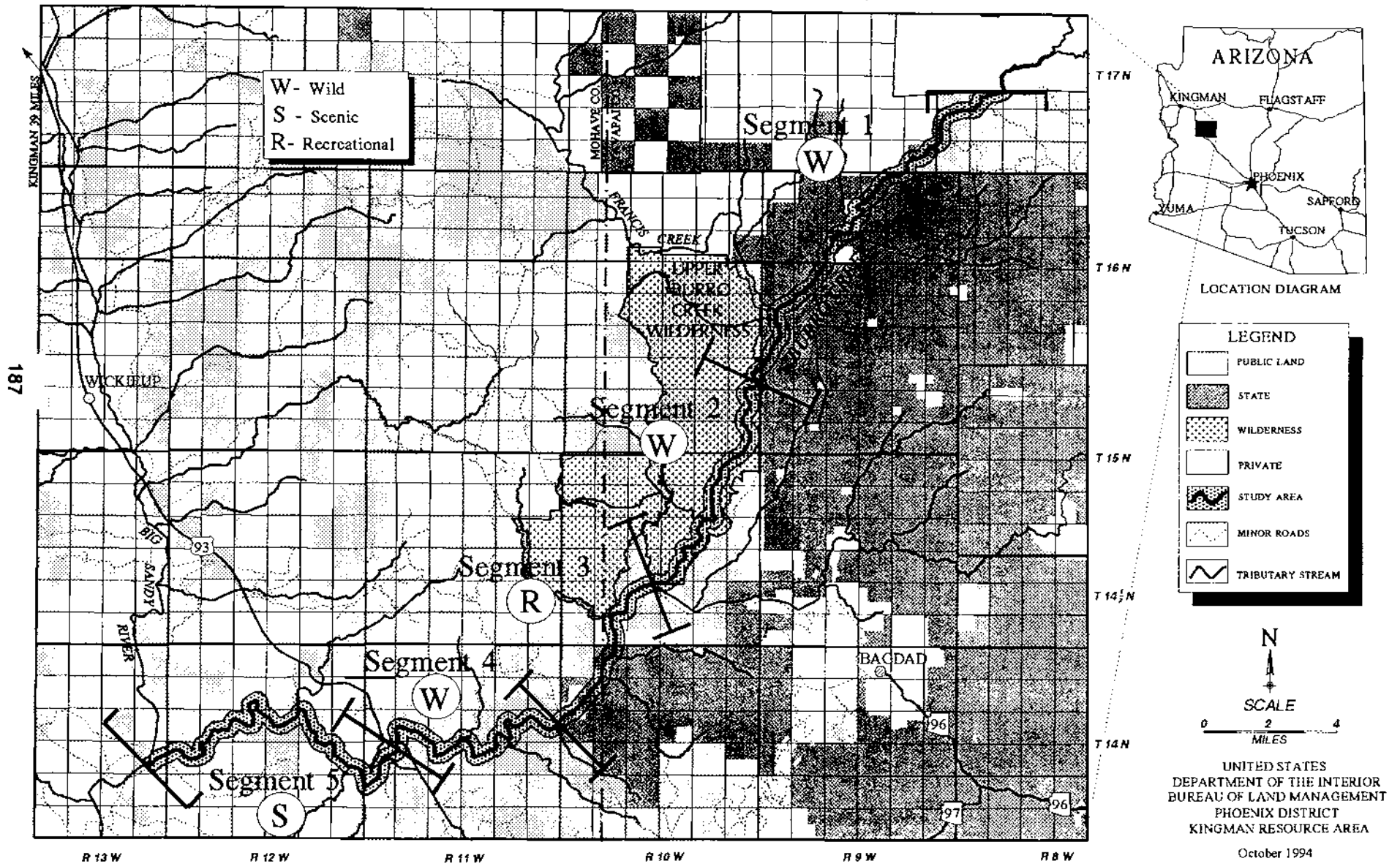
Ongoing management actions

Ongoing management actions in the Burro Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Upper Burro Creek Wilderness Area Management Plan, Kingman Resource Management Plan, and Burro Creek Riparian and Cultural Area of Critical Environmental Concern Plan.

- The 3,223 acres of the study area in the Upper Burro Creek Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights. Approved mining plans of operations would be required for all operations above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Motorized travel is prohibited on 3,223 acres in the Upper Burro Creek Wilderness Area, subject to valid existing rights.
- New road development would be prohibited within 1/2 mile of any bald eagle nest.
- Off-highway vehicle use would be limited to existing roads and trails on 1,300 acres, designated as Scenic or Recreational, outside the wilderness and the area of critical environmental concern.

BURRO CREEK

(All Suitable Alternative)



BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/2 mile of any bald eagle nest during breeding season from January 1 to June 1.
 - Campground development would be restricted to areas outside the riparian zone, the 100-year flood plain, and river segments designated as Wild.
 - Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
 - The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
 - Black hawk breeding activities would be monitored.
 - Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
 - An all-aged stand of key native trees, shrubs, and grasses would be promoted.
 - Removal of native plants would be prohibited except for salvage operations.
 - The Riparian Area Condition Evaluation inventory would continue.
 - Water quality would be regularly monitored to determine compliance with state standards established for streams designated as Unique Waters.
 - Formal notification of the federal reserved water right established at the time of designation of the Upper Burro Creek Wilderness Area would be made to the Arizona Department of Water Resources.
 - New major utility corridors would be prohibited.
 - Efforts would be made to acquire up to 280 acres of non-federal mineral estate under public land on a willing seller-willing buyer basis.
 - Efforts would be made to acquire up to 6,042 acres of state and private land on a willing seller-willing buyer basis or by exchange.
 - Efforts would be made to initiate development of a Cooperative Management Agreement with the Cyprus Bagdad Corporation and Byner Cattle Company to manage the 7.1 miles of riparian land in segment 3.
 - Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing enclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
 - Desired plant community descriptions would be developed and incorporated into allotment and herd management area plans.
 - Grazing intensity would be reduced to allow use only during the winter non-growing season on the Bagdad allotment in segment 3.
- The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.
- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
 - Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
 - If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
 - Selected areas along Burro Creek would be inventoried, with cultural resource project plans

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

prepared for specific sites.

- Protection measures, such as fencing or periodic patrolling, would be developed for specific cultural resources that have either a high level of significance or a history of vandalism.

Approximately 1,300 acres, designated as Scenic or Recreational, outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals in accordance with the Kingman Resource Management Plan.

- On these 1,300 acres, mining plans of operations would be required for all operations exceeding the disturbance level of five acres as defined at 43 CFR 3809.1-3.

The following management prescriptions would apply to 1,130 acres designated as Scenic or Recreational in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, as discussed in the Kingman Resource Management Plan.

- The 1,130 acres would be recommended for withdrawal from new mineral entry, subject to valid existing rights.
- Approved mining plans of operations would be required for all operations above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mineral material disposals of saleable sand, gravel, and related deposits would be prohibited.
- The Bureau of Land Management would stipulate no surface occupancy for mineral leases.
- Off-highway vehicle use would be limited to designated roads and trails.

D. NO ACTION ALTERNATIVE

The no action alternative determines that the Burro Creek study area is nonsuitable and does not recommend it for inclusion in the National Wild and Scenic Rivers System.

Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Under the no action alternative, the study area's 3,223-acre portion in the wilderness area would continue to be directed by provisions of the Wilderness Act.

Thirty-two percent (4,933 acres) of the study area is in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and would be managed under the provisions of the area of critical environmental concern plan.

Wild and Scenic River management actions

Under the no action alternative, there would be no wild and scenic river designation.

Ongoing management actions

Ongoing management actions in the Burro Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Upper Burro Creek Wilderness Area Management Plan, Kingman Resource Management Plan, and Burro Creek Riparian and Cultural Area of Critical Environmental Concern Plan.

- The 3,223 acres of the study area in the Upper Burro Creek Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights. Approved mining plans of operations would be required for all operations above the level of casual use as defined at 43 CFR 3809.0-5(b).

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

- Motorized travel is prohibited on 3,223 acres in the Upper Burro Creek Wilderness Area,

subject to valid existing rights.

- New road development would be prohibited within 1/2 mile of any bald eagle nest.
- Off-highway vehicle use would be limited to existing roads and trails in zones outside of the wilderness area and the area of critical environmental concern.
- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/2 mile of any bald eagle nest during breeding season from January 1 to June 1.
- Campground development would be restricted to areas outside the riparian zone and the 100-year flood plain.
- Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
- The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
- Black hawk breeding activities would be monitored.
- Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
- An all-aged stand of key native trees, shrubs, and grasses would be promoted.
- Removal of native plants would be prohibited except for salvage operations.
- The Riparian Area Condition Evaluation Inventory would continue.
- Water quality would be regularly monitored to determine compliance with state standards established for streams designated as Unique

Waters.

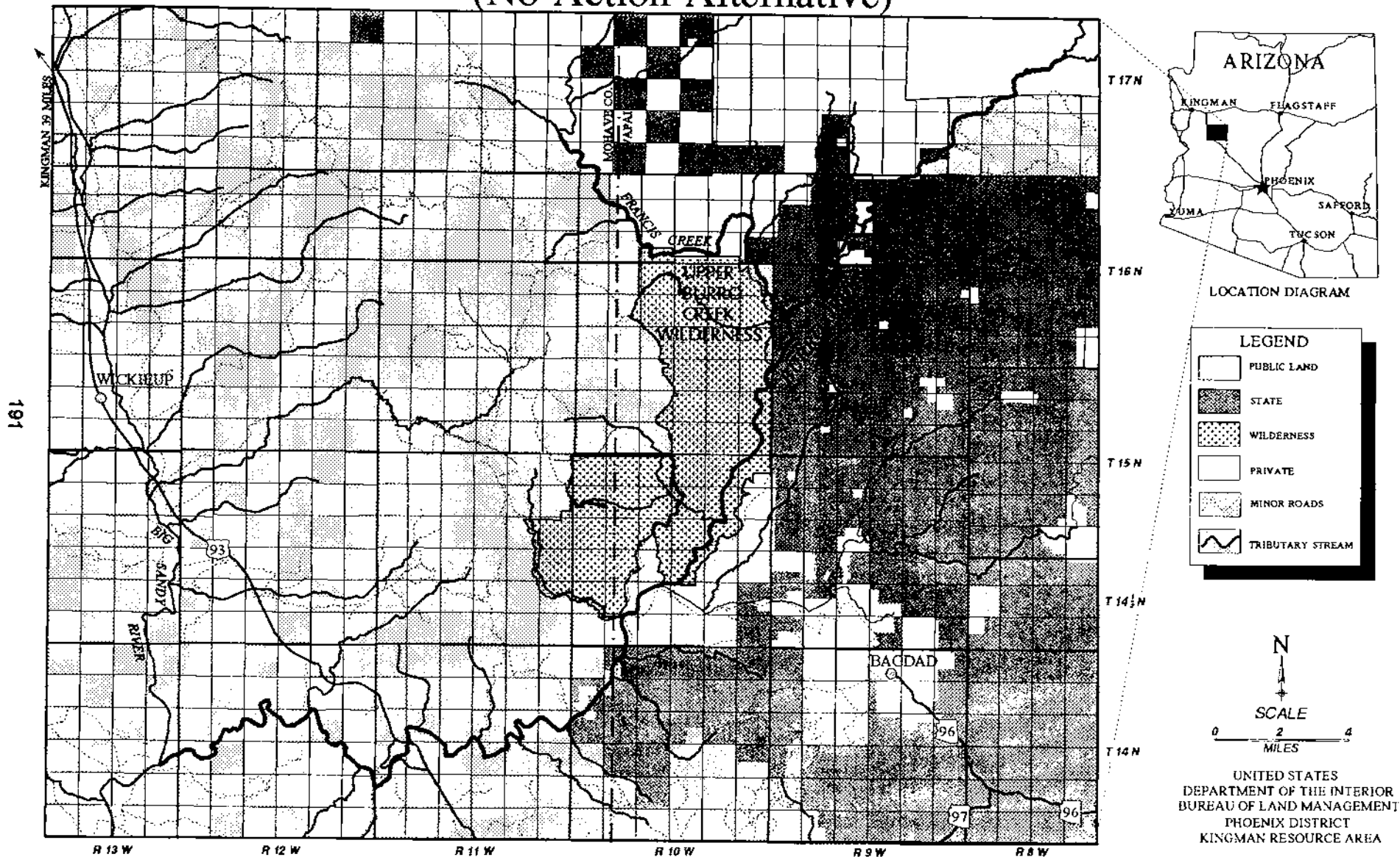
- Formal notification of the federal reserved water right established at the time of designation of the Upper Burro Creek Wilderness Area would be made to the Arizona Department of Water Resources.
- New major utility corridors would be prohibited.
- Efforts would be made to acquire up to 280 acres of non-federal mineral estate under public land on a willing seller-willing buyer basis.
- Efforts would be made to acquire up to 6,042 acres of state and private land on a willing seller-willing buyer basis or by exchange.
- Efforts would be made to initiate development of a Cooperative Management Agreement with the Cyprus Bagdad Corporation and Byner Cattle Company to manage the 7.1 miles of riparian land in segment 3.
- Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing exclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
- Desired plant community descriptions would be developed and incorporated into allotment and herd management area plans.
- Grazing intensity would be reduced to allow use only during the winter non-growing season on the Bagdad allotment in segment 3.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.

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(No Action Alternative)



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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA

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- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by the proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- Selected areas along Burro Creek would be inventoried, with cultural resource project plans prepared for specific sites.
- Protection measures, such as fencing or periodic patrolling, would be developed for specific cultural resources that have either a high level of significance or a history of vandalism.

Approximately 1,300 acres outside of the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals in accordance with the Kingman Resource Management Plan. Mining plans of operations would be required for all operations exceeding the disturbance level of five acres as defined at 43 CFR 3809.1-3.

The following management prescriptions would apply to 4,933 acres in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, as discussed in the Kingman Resource Management Plan.

- Public land would be recommended for withdrawal from new mineral entry, subject to valid existing rights.

- Approved mining plans of operations would be required for all operations above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Mineral material disposals of saleable sand, gravel, and related deposits would be prohibited.
- The Bureau of Land Management would stipulate no surface occupancy for mineral leases.
- Off-highway vehicle use would be limited to designated roads and trails.

E. ALTERNATIVES CONSIDERED BUT REJECTED

One alternative considered would recommend as not suitable those areas having moderate to high mineral potential. This condition applies to segments 3, 4, and 5 within the Burro Creek study area. This alternative was rejected because those segments contain outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

The Arizona Rivers Coalition (1991) suggested an alternative encompassing approximately the entire area in the Burro Creek study area. This alternative recommends that the entire length of Burro Creek be designated as Wild.

The alternative was considered but rejected because the recommendation of a Wild classification for the entire area was not consistent with the conclusions of the Bureau of Land Management eligibility study.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE BC-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative	All suitable	No action
Outstandingly Remarkable Scenic Values	Potential adverse impact from mineral development on 1,300 acres; Beneficial impact from long-term legislative protection on 7,010 acres.	No adverse impact. Beneficial impact from long-term legislative protection.	No adverse impact on 8,158 acres; Potential adverse impact from mineral development on 1,300 acres; No long-term legislative protection.
Outstandingly Remarkable Recreational Values	Potential adverse impact from mineral development on 1,300 acres; Beneficial impact from long-term legislative protection on 7,010 acres.	No adverse impact. Beneficial impact from long-term legislative protection.	No adverse impact on 8,158 acres; Potential adverse impact from mineral development on 1,300 acres. No long-term legislative protection.
Outstandingly Remarkable Fish and Wildlife Habitat	Potential adverse impact from mineral development on 1,300 acres; Beneficial impact from long-term legislative protection on 7,010 acres.	No adverse impact; Beneficial impact from long-term legislative protection.	No adverse impact on 8,158 acres; Potential adverse impact from mineral development on 1,300 acres. No long-term legislative protection.
Outstandingly Remarkable Cultural Resource Values	No adverse impact on 8,158 acres. Potential adverse impact from mineral development on 1,300 acres. Beneficial impact from long-term legislative protection on 7,010 acres.	No adverse impact; Beneficial impact from long-term legislative protection.	No adverse impact on 8,158 acres; potential adverse impact from mineral development on 1,300 acres. No long-term legislative protection.
Mineral Development	Adverse impact from legislative withdrawal of 4,260 acres from mineral entry, leasing, and material sales.	Adverse impact from legislative withdrawal of 3,820 acres from mineral entry, leasing, and material sales.	No adverse impact.
Water Quality	No direct adverse impact. Possible indirect adverse impact from drainage of pollutants from abandoned mines on private land.	No direct adverse impact. Possible indirect adverse impact from drainage of pollutants from abandoned mines on private land.	No direct adverse impact. Possible indirect adverse impact from drainage of pollutants from abandoned mines on private land.
Economic Base and Stability of Bagdad	No adverse impact.	Indirect impact if future utility lines are prohibited in Segment 3.	No adverse impact.

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III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Burro Creek study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Kingman Resource Management Plan, the Upper Sonoran Wilderness Environmental Impact Statement, and the Burro Creek Wild and Scenic Suitability Determination Report (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

Buro Creek is distinguished by outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

The outstanding scenic qualities consist of rugged volcanic landforms, deep canyons, colorful rock outcrops and layering, beautiful pools and waterfalls, slickrock areas, undeveloped shorelines, riparian vegetation, and abundant wildlife. The study area is dominated by broad, deeply incised canyons which narrow in several locations to create deep pools and cascades. Colorful volcanic deposits have drawn scientists and naturalists for research. Hot springs and significant obsidian deposits are part of the scenic and scientific diversity.

The outstandingly remarkable recreational values are generated by the scenic qualities of the area. Burro Creek offers outstanding recreational opportunities for hiking, photography, sight-seeing, wildlife observation, swimming, and hunting. The Burro Creek Recreation Site allows the public to take advantage of these recreational opportunities in the areas adjacent to U.S. Highway 93. More primitive recreational opportunities are available in segment 1 and the Upper Burro Creek Wilderness Area.

Buro Creek is rich in biodiversity and has outstandingly remarkable fish and wildlife habitat

values. The riparian habitat supports at least five native fish species and one of the greatest recorded diversities of birds of prey anywhere in the United States. The area is known to support at least nine federally-listed or candidate fish, amphibian, reptile, bird, and mammal species. The uplands adjacent to the creek exhibit an unusual mixture of plants characteristic of the Sonoran and Mohave deserts.

Outstandingly remarkable cultural resource values reflect the rare and unusual types of prehistoric sites near Burro Creek. The westernmost known occurrence of multi-storied, stone masonry pueblos constructed by the prehistoric Prescott Culture exists along upper Burro Creek. These sites are well preserved, some with standing walls eight feet high. Further downstream, archaeological investigations revealed that people in the prehistoric period grew corn along the creek, one of the few locations where farming was possible in this arid region of Arizona. Deposits of obsidian volcanic glass along lower Burro Creek were an important source of materials for the production of stone tools.

B. MINERALS

Segment 3 and the area to its east, surrounding Bagdad, are classified as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and segments 1 and 2 have low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

Currently there is no gold mining activity in the area, but in the past gold was mined about four miles south of the Burro Creek Recreation Site (in segment 5, downstream of the U.S. Highway 93 bridge).

Approximately 129 active mining claims exist

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within two miles of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation. The Cyprus Bagdad open pit mine at Bagdad is a major copper producer. It mines ore from predominantly patented property; only a small amount of public land is involved in this operation.

The region surrounding the study area has no potential for oil, gas, coal, sodium, or other saline materials. There is a high potential for geothermal resources.

GSA Resources operates the Burro Creek Clay Mine, an open pit saponite clay mine eight miles southwest of Bagdad in segment 3.

C. LANDS

Three areas of concentrated transportation and utility systems exist along Burro Creek and adjacent areas of Francis Creek. Each is a right-of-way utility corridor designated by the Kingman Resource Management Plan. One is at the Highway 93 span across Burro Creek, the boundary between segments 4 and 5. Major electric transmission lines as well as the highway occupy this corridor.

Two corridors serve the town of Bagdad. One corridor is in segment 3 near Six-Mile Crossing, where a 69 kV transmission line and a natural gas pipeline cross the creek. The other area is along a portion of segment 1 and lower Francis Creek. This area has a road, a 12-inch water pipeline, and a 2-inch gas pipeline that parallel the Upper Burro Creek Wilderness boundary to a pump station midway up Francis Creek. The water, from Francis Creek, supplies about 85 percent of the domestic needs of Bagdad.

There are approximately 3,300 acres of private land and over 2,800 acres of state lands in the Burro Creek study area.

D. RECREATION

Major recreational activities include camping, hiking, backpacking, waterplay, rockhounding,

picnicking, hunting, and wildlife viewing. Because of the combination of outstanding scenery and perennial water, the study area receives visitors from throughout Arizona and neighboring states.

Data from the Bureau of Land Management Recreation Management Information System show that for Fiscal Year 1992 there were 22,350 visitor days in the Burro Creek Special Recreation Management Area, which encompasses parts of segments 4 and 5.

The 22-unit Burro Creek Recreation Site is located along segment 5 of Burro Creek, just downstream of the Highway 93 bridge. This site has drinking water, restrooms, and other related facilities. In Fiscal Year 1992, the site had 9,176 visitor days of overnight camping and 15,000 day-use visits such as picnicking, wildlife viewing and waterplay. The site is also designated as a "Watchable Wildlife" site.

The Arizona Rivers Assessment (Phase II) ranked the uniqueness and diversity of recreation opportunities in the study river area. Segments 1 and 2 were rated low to medium, where values are either limited or standard for what is typically available within the state. Segments 3 and 4 were rated as having substantial opportunities, which are described as being very important, among the finest in the state and capable of providing quality recreation experiences. Segment 5, excluding that portion containing the Burro Creek Recreation Site, was rated as low. The low ratings may be a result of the difficulty of physical access to these stretches.

E. WILDLIFE

The Burro Creek study area contains a highly diverse range of habitats and wildlife, with at least 150 bird species and five native fish species. Special status species known to inhabit the area include federally-listed and candidate species, and state-listed threatened species. A particularly significant aspect is the diverse population of birds of prey, including

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

bald eagles (*Haliaeetus leucocephalus*) and peregrine falcons (*Falco peregrinus*), both federally-listed endangered species. Burro Creek is an important bald eagle wintering zone, and a breeding area has recently been discovered there.

The creek supports the largest breeding assemblage of Mexican black-hawks (*Buteo anthracinus anthracinus*) in North America. Other raptors include ospreys (*Pandion haliaetus carolinensis*), zone-tailed hawks (*Buteo albonotatus*), and ferruginous hawks (*Buteo regalis*), a candidate category II species.

Special status birds also include great egrets (*Casmerodius albus*), snowy egrets (*Egretta thula*), and western yellow-billed cuckoos (*Coccyzus americanus occidentalis*).

Candidate category II species observed near Burro Creek are desert tortoises (*Gopherus agassizii*) and California leaf-nose bats (*Myotis lucifugus*). Candidate category II amphibian species along Burro Creek are Arizona Southwest toads (*Bufo microscaphus microscaphus*) and lowland leopard frogs (*Rana yavapalensis*).

The five native fish species include Colorado River round-tailed chub (*Gila robusta robusta*), and Sonora suckers (*Catostomus insignis*), both candidate category II species. Other native fish species in Burro Creek are longfin dace (*Agoșia chrysoaster*), speckled dace (*Rhinichthys osculus*), and mountain suckers (*Pantosteus clarki*).

According to the U.S. Fish and Wildlife Service, seven additional proposed or candidate species may be present along Burro Creek. These include Southwestern willow flycatchers (*Empidonax traillii extimus*), a bird species proposed for listing as endangered. Candidate category II species potentially present in the area include spotted bats (*Euderma maculatum*), loggerhead shrikes (*Lanius ludovicianus*), chuckwallas (*Sauromalus obesus*), Rosy boas (*Lichanura trivirgata*),

Yavapai Arizona pocket mice (*Perognathus amplus amplus*), and Hualapai southern pocket gopher (*Thomomys umbrinus hualpaiensis*).

F. VEGETATION

The diversity of vegetation zones in the Burro Creek study area reflects the elevation range, topographic complexity, and perennial water in the area. In addition, unusual combinations of species, such as associations of juniper (*Juniperus monosperma*), Mojave yucca (*Yucca schidigera*), palo verde (*Cercidium microphyllum*) and saguaro (*Carnegia gigantea*), are associated with the area's transitional position between the Sonoran and Mojave Deserts. Upland vegetation at the higher elevations adjacent to upper Burro Creek consists of pinyon-juniper, chaparral, and grassland communities. A palo verde-saguaro community exists downstream at lower elevations.

Cottonwood-willow, mixed broadleaf and mesquite bosque riparian communities exist along the creek. The dominant plants in these communities include cottonwood (*Populus fremontii*), willow (*Salix goodingii*), ash (*Fraxinus velutina*), netleaf hackberry (*Celtis reticulata*), and mesquite (*Prosopis juliflora*).

Arizona cliffrose (*Purshia subintegra*), a federally-listed endangered species, exists on limy tuff soils on hillsides in the vicinity of segment 3.

G. CULTURAL RESOURCES

The rich natural resources associated with Burro Creek's riparian setting attracted prehistoric occupants. Masonry pueblo sites along upper Burro Creek, occupied sometime between A.D. 900-1200, represent the westernmost manifestation of the prehistoric Prescott Culture.

Other types of archaeological sites in the area include caves and rockshelters, artifact scatters, and petroglyph sites. The prehistoric people manufactured stone tools from obsidian

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collected near Burro Creek.

Geochemical analyses of stone from Burro Creek and other localities have enabled archaeologists to determine the sources of obsidian found at prehistoric sites throughout Arizona.

H. WATER RESOURCES

A federal reserved water right was created for that portion of Burro Creek within the Upper Burro Creek Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right is ongoing and notification would be given to the State of Arizona.

The Bureau of Land Management submitted an application to the State of Arizona in 1984 (No. 33-89119) for instream flow on Francis and Burro Creeks for wildlife, fisheries, and recreation purposes. This application is being amended to include two separate assessments, one for the Francis Creek portion and one for the public land reaches of Burro Creek.

The State of Arizona has designated Burro Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18, Chapter 11, 1992). Streams designated as Unique Waters have good water quality and either exceptional recreational or ecological significance, or the provision of critical habitat for threatened or endangered species. The state sets water quality standards that apply to designated Unique Waters.

Water quality and quantity monitoring sites have been established along Burro Creek to measure quality and provide baseline data in support of an instream flow assessment. The U.S. Geological Survey operates and maintains a station about 15 miles upstream from the confluence with the Big Sandy River. According to U.S. Geological Survey monitoring data, the average discharge is 63.5 cubic feet per second. The maximum recorded discharge was 30,600 cubic feet per second on March 3, 1980. There is no flow at times in some years.

I. LIVESTOCK GRAZING

There are seven grazing allotments through which a segment that is recommended for designation flows. Segment 1 lies within the 7L and Upper Burro Creek grazing allotments. Segments 3 and 4 of Burro Creek lie within the Bagdad, Black Mesa, Burro Creek Ranch and Greenwood Peak Community allotments. Segment 5 lies within the Burro Creek Ranch, Greenwood Peak Community, and Greenwood Community allotments. These allotments account for 136,722 acres of public land and 8,384 animal unit months.

These allotments contain a mixture of perennial and ephemeral forage. Completed allotment management plans exist for the Burro Creek and Black Mesa Allotments. The objectives are to improve currently unsatisfactory conditions.

The Bagdad Allotment Management Plan for the allotment operated by the Byner Cattle Company, a subsidiary of Cyprus Minerals Corporation, has been implemented to reduce livestock utilization of riparian areas in segment 3. The objective is to improve unsatisfactory riparian habitat conditions caused by past overgrazing and by large flood events in 1979 and 1980. Livestock use of riparian areas would be prohibited during the growing season and allowed only during the winter months.

J. LOCAL POPULATION AND ECONOMY

This section considers three components of the social framework: population, income and employment, and pertinent social perceptions. For the purposes of this study, data have been aggregated into an environmental study area defined by a circular area 100 miles in diameter centered generally on the segments of Burro Creek that cross the Bureau managed land. The environmental study area covers portions of La Paz, Mohave and Yavapai Counties in Arizona.

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Population

In 1990 about 70,000 people lived in the Burro Creek Environmental Study Area. Prescott, in Yavapai County, and Lake Havasu City, in Mohave County, are the major population centers. There was an estimated 40 percent

increase in population for the environmental study area between 1980 and 1990. Tables BC-4 and BC-5 show selected population details and projections.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE BC-4
POPULATION: SELECTED CITIES**

County/Municipality	1980	1990	PCT CHG
LA PAZ	(1)	13,384	
Bouse*	618	515	-16.7
Parker	2,542	2,897	14.0
Salome/Wenden*	709	1,457	105.5
MOHAVE	55,865	93,497	67.4
Lake Havasu City	15,909	24,363	53.1
YAVAPAI COUNTY	68,145	107,714	58.1
Bagdad*	2,349	1,858	-20.9
Prescott	19,865	26,455	33.2
Wickenburg	3,535	4,515	27.7

(1) La Paz County was created in 1983

Source: Arizona: Census Bureau

* Arizona Community Profiles

Population Projections

**TABLE BC-5
POPULATION PROJECTIONS: SELECTED CITIES**

Places	1995	2000	2010	2020
ARIZONA	4,134,900	4,632,900	5,653,000	6,812,000
LA PAZ COUNTY	15,522	16,684	19,123	21,697
Parker	3,051	3,279	3,758	4,264
MOHAVE COUNTY	116,523	134,603	171,276	208,477
Lake Havasu City	33,297	38,404	48,944	59,574
YAVAPAI COUNTY	123,894	141,123	180,795	222,680
Bagdad	1,860	1,860	1,865	1,870
Prescott	29,448	32,636	39,975	47,724

Source: Arizona Projections for 1993-2040 by Place, Arizona Department of Economic Security, Research Administration, Population Statistics Unit, May, 1993

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Income and Employment

There is a wide variation in the per capita income of the residents of the Burro Creek environmental study area (Table BC-6). For

example, the data show per capita income figures for Lake Havasu City are significantly higher than comparable figures for Prescott or Parker.

**TABLE BC-6
PER CAPITA INCOME: SELECTED CITIES**

Area Name	1987	1979	PCT CHG
ARIZONA	11,521	7,042	63.6
LA PAZ COUNTY	8,263	5,063	63.2
Parker	10,353	6,133	68.8
Lake Havasu City	12,228	7,717	65.6
YAVAPAI COUNTY	9,838	6,450	52.5
Bagdad	Not Available	Not Available	
Prescott	10,676	7,143	49.5

Source: Population Estimates (1988) and Per Capita Income (1987) for Counties, Incorporated Places and Selected Towns and Townships: Arizona, U.S. Census, February 1, 1990.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Nonagricultural employment is the primary source of income throughout the area. Table BC-7 displays data indicating that the Trade,

Services, and Government sectors are major employers in each of the Burro Creek environmental study area counties.

**TABLE BC-7
LABOR AND EMPLOYMENT: COUNTIES**

	LaPaz	PCT	Mohave	PCT	Yavapai	PCT	Maricopa	PCT
CIVILIAN LABOR FORCE*	5825		33150		41075		108830	
Total Unemployment	425		2800		2200		7280	
Rate	7.3		7.3		5.4		6.8	
Rate (Season .Adj.)	7.4		7.4		5.4		7.4	
Total Employment	5400		35350		38875		99540	
TOTAL WAGE AND SALARY	4125		27750		41075		101820	
Manufacturing	250	6.0	2800	10.0	2250	5.5	11800	1.1
Mining and Quarrying	75	1.8	50	0	950	2.3	700	
Construction	225	5.4	3275	8.2	2650	6.5	52100	5.1
T.C.P.U.	150	3.6	1275	4.6	1075	2.6	56400	5.5
Trade	1300	31.5	8550	28.8	7950	19.3	263100	25.9
F.I.R.E.	100	2.4	1275	3.5	875	2.4	75500	7.4
Services and Misc.	1000	24.2	6200	26.8	7450	18.1	291200	28.7
Government	825	22.4	4500	16.2	6125	14.8	145800	14.3

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

T.C.P.U. - Transportation, Communications, and Public Utilities

F.I.R.E. - Finance, Insurance, and Real Estate

Source: Nonmetropolitan Counties Labor Force and Employment: December 1990, Arizona Labor Market Information Newsletter, 15 (2), 10 February 1991.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Social Perceptions

This section identifies and discusses those types of perceptions that relate to social issues and concerns pertaining to the Burro Creek environmental study area.

Residents of the town of Bagdad, in Yavapai County, have voiced strong opposition to any recommendation for including the Burro Creek segments in the National Wild and Scenic Rivers System. They maintain protection is not needed because the river is not threatened, and contend that wild and scenic river management would unnecessarily duplicate federal activities now in place with the area of critical environmental concern and wilderness designations.

Residents throughout Mohave and La Paz Counties tend to be skeptical about the Bureau of Land Management and other government agency activities, and harbor suspicion that each new federal government program threatens their rights to privacy. They feel the restrictions inherent in this type of classification would inhibit or prevent potential future developments.

Profile Community

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment. Bagdad was officially named on January 1, 1882. The post office was established in 1944.

Bagdad's major economic activities are mining and education. In 1990 there were 736 people in the Bagdad civilian labor force with a 0.4 percent unemployment rate. Cyprus Bagdad Copper Mine employs over 600 people while Bagdad School District has about 80 employees.

The community has a small shopping center with a grocery store, beauty shop, retail shops and small professional offices.

The Cyprus Bagdad operation consists of an open pit copper-molybdenum mine, a 75,000 ton per day concentrator, a dump leach operation, and an solvent extraction-electrowinning plant. Mining is conducted by electric shovels using truck haulage to the primary crusher and dumps.

The Cyprus Bagdad operation makes use of water rights on the Big Sandy River and Francis Creek, and is dependent on utility corridors (electric, water, and natural gas) that cross Burro Creek and Big Sandy River.

GSA Resources operates the Burro Creek Clay Mine, an open pit saponite clay mine eight miles southwest of Bagdad along Burro Creek.

Scenic attractions include the Prescott National forest about 20 miles away.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Burro Creek study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

9. Management plans would be developed for any Congressionally designated wild and scenic river.

10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine.

Large mining operations would be those involving more than five acres and subject to approval of a Bureau of Land Management approved Mining Plan of Operation. Any restrictions on mineral development would be subject to valid existing rights.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The Burro Creek study area possesses outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

The recommended alternative consists of the following:

Segment 1, 13.5 miles long (4,080 acres), 2.2 miles is determined suitable and recommended for designation as Wild and the remaining 11.3 miles nonsuitable and not recommended;

Segment 2, 8.5 miles long (2,750 acres), is determined suitable and recommended for designation as Wild;

Segment 3, 7.1 miles (2,210 acres), is determined to be nonsuitable and not recommended for designation;

Segment 4, 9 miles (2,630 acres), is determined suitable and recommended for designation as Wild;

Segment 5, 11.4 miles long (3,980 acres), 5.5 miles is determined suitable and recommended for designation as Wild and the remaining 5.9 miles is determined to be nonsuitable and is not recommended to Congress for inclusion in the National Wild and Scenic Rivers System.

Segment 3 and the area to its east, surrounding Bagdad, are classified as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and segments 1 and 2 have low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

Currently there is no gold mining activity in the area, but in the past gold was mined about four miles south of the Bureau of Land Management Burro Creek Recreation Site (segment 5, downstream of the U.S. Highway 93 bridge).

Approximately 129 active mining claims exist in two miles of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation. The Cyprus Bagdad open pit mine

at Bagdad is a major copper producer.

River management in the study area's 3,223-acre portion of the Upper Burro Creek Wilderness Area (all of segment 2 and small portions of segments 1 and 3) would comply with the provisions of the Wilderness Act.

Thirty-two percent (4,933 acres) of the study area is in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and would be managed under the provisions of the area of critical environmental concern plan.

Under the recommended alternative, outstandingly remarkable values in the segments determined to be suitable would receive the protection of special legislation.

However, under the recommended alternative, the outstandingly remarkable values in the 26.4 miles in segments not suitable and not recommended for designation, including approximately 1,973 acres of public land, would not receive special legislative protection under the Wild and Scenic Rivers Act.

The outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values in these areas would be subject to the effects of actions under the management of the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and in accordance with the Kingman Resource Management Plan.

Impacts on outstandingly remarkable scenic values.

The outstanding scenic qualities consist of rugged volcanic landforms, deep canyons, colorful rock outcrops and layering, pools and waterfalls, slickrock areas, undeveloped shorelines, riparian vegetation, and abundant wildlife. Colorful volcanic deposits have drawn scientists and naturalists for research. Hot springs and significant obsidian deposits are part of the scenic and scientific diversity.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Outstanding scenic values would be protected, on 7,010 acres designated as Wild, by the prohibitions on new mineral entry, mineral leasing, and material disposals. These actions would protect the outstandingly remarkable scenic values from visual conflicts that may arise from mineral operations.

Under Wild designation, mineral development on 7,010 acres would be conducted to minimize surface disturbance and visual impairment. Prohibiting new roads and motorized travel would protect scenic values on 7,010 acres designated as Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 7,010 acres designated as Wild would protect the outstandingly remarkable scenic values from overuse.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 7,010 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable scenic values.

The prohibition on construction of new dams and major diversions on up to 25.2 miles, in accordance with the Wild and Scenic Rivers Act, would further protect scenic values by retaining the waterway in the condition it was in when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, the prohibition on new major utility corridors would protect scenic values by preserving the natural character of the landscape. Acquiring up to 6,042 acres of private and state land, on a willing seller-willing

buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable scenic values on the acquired lands.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims could cause adverse impacts to outstandingly remarkable scenic values from excavations, machinery, dust, noise, and new roads associated with these operations.

• Conclusion

There would be no adverse impacts to outstandingly remarkable scenic values on the 7,010 acres designated as Wild. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable scenic values on 7,010 acres.

The outstandingly remarkable scenic values on 1,300 nonsuitable acres could be adversely impacted by mineral development activities. These outstandingly remarkable scenic values would not have long-term protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable recreational values.

The outstandingly remarkable recreational values are generated by the scenic qualities of the area. Burro Creek offers outstanding recreational opportunities for hiking, photography, sight-seeing, wildlife observation, swimming, and hunting. The Burro Creek Recreation Site allows the public to take advantage of these recreational opportunities in the areas adjacent to Highway 93. More primitive recreational opportunities are available in segment 1 and the Upper Burro Creek Wilderness Area.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

The Bureau of Land Management Recreation Management Information System shows 22,350 visitor days during Fiscal Year 1992 in the Burro Creek Special Recreation Management Area, which encompasses part of segments 4 and 5.

Outstanding recreational values would be protected, on 7,010 acres designated as Wild, by prohibitions on mineral entry, leasing, and material disposals. These actions would protect the outstandingly remarkable recreational values from visual conflicts that may arise from mineral operations.

Under Wild designation, mineral development on 7,010 acres would be conducted to minimize surface disturbance and visual impairment. Prohibiting new roads and restricting motorized use would protect recreational values on 7,010 acres designated Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 7,010 acres designated as Wild would protect the outstandingly remarkable recreational values from overuse.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 7,010 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable recreational values.

The prohibition on construction of new dams and major diversions on up to 25.2 miles, in accordance with the Wild and Scenic Rivers Act, would further protect recreational values by retaining the waterway in the condition it was when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable recreational values would be

supplied by the ongoing management activities described in Chapter 2. For example, the prohibition on new major utility corridors would protect values by preserving the natural character of the landscape. Acquiring up to 6,042 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable recreational values on the acquired lands.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims, or new mineral material disposals, could cause adverse impacts to outstandingly remarkable recreational values from excavations, machinery, dust, noise, and new roads associated with these operations.

On the nondesignated acreage the outstandingly remarkable recreational values would be protected by the ongoing management activities described in Chapter II.

• Conclusion

There would be no adverse impacts to outstandingly remarkable recreational values on the 7,010 acres designated as Wild. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable recreational values on 7,010 acres.

The outstandingly remarkable recreational values on 1,300 nonsuitable acres could be adversely impacted by mineral development activities. These outstandingly remarkable recreational values would not have long-term protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable fish and wildlife habitat values.

The Burro Creek study area has a highly diverse

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

range of habitats and wildlife, with five native fish species, federally-listed and candidate species, and state-listed threatened species.

The five native fish species include Colorado River round-tailed chub, a special status species. Other native fish species in Burro Creek are longfin dace, speckled dace, Sonora suckers, and mountain suckers. Bald eagles and peregrine falcons are federally-listed endangered species. The ferruginous hawk is a candidate category II species. Special status birds also include great egrets, snowy egrets, and western yellow-billed cuckoos.

Candidate category II reptiles and mammals observed near Burro Creek are desert tortoises and California leaf nose bats. Candidate category II amphibian species along Burro Creek are Arizona Southwest toads and Yavapai leopard frogs. The Arizona cliffrose, a federally-listed endangered species, exists on limy tuff soils on hillsides in the vicinity of segment 3.

Outstanding fish and wildlife habitat values would be protected, on 7,010 acres designated as Wild, by prohibitions on mineral entry, leasing, and material disposals. These actions would protect the outstandingly remarkable fish and wildlife habitat values from disturbance that could be associated with mineral operations.

Under Wild designation, mineral development on 7,010 acres would be conducted to minimize surface disturbance and pollution. Prohibiting new roads and restricting motorized use would protect fish and wildlife habitat values on 7,010 acres designated as Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 7,010 acres designated as Wild would protect the outstandingly remarkable fish and wildlife habitat values from disturbance.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility

lines would be discouraged unless authorized by other laws. On the 7,010 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed to minimize adverse impacts on outstandingly remarkable fish and wildlife habitat values.

The prohibition on construction of new dams and major diversions on up to 25.2 miles, in accordance with the Wild and Scenic Rivers Act, would further protect fish and wildlife habitat values by retaining the waterway in the condition it was when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, prohibitions on roads, helicopter flights, and intensive recreational activities near bald eagle nests would protect eagles from disturbance by human activities. Acquiring up to 6,042 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable fish and wildlife habitat values on the acquired lands.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims, or new mineral material disposals, could cause adverse impacts to outstandingly remarkable fish and wildlife habitat values from excavations, machinery, dust, noise, and new roads associated with these operations.

On the nondesignated acreage, the outstandingly remarkable fish and wildlife habitat values would be protected by the ongoing management activities described in Chapter II.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

• Conclusion

There would be no adverse impacts to outstandingly remarkable fish and wildlife habitat values on the 7,010 acres designated as Wild. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable fish and wildlife habitat values on 7,010 acres.

The outstandingly remarkable fish and wildlife habitat values on 1,300 nonsuitable acres could be adversely impacted by mineral development activities. These outstandingly remarkable fish and wildlife habitat values would not have long-term protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable cultural resource values.

The westernmost known occurrence of multi-storied, stone masonry pueblos constructed and occupied sometime between A.D. 900-1200 by the people of the prehistoric Prescott Culture exists along upper Burro Creek. These sites are well preserved, some with standing walls eight feet high.

Further downstream, archaeological investigations have revealed that people in the prehistoric period grew corn along the creek, one of the few locations where farming was possible in this arid region of Arizona. The prehistoric people manufactured stone tools from an important source of obsidian near Burro Creek.

Under Wild designation, mineral development on 7,010 acres would be conducted to minimize surface disturbance. Prohibiting new roads and motorized travel would protect cultural resource values on 7,010 acres designated Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 7,010 acres designated as Wild would protect the

outstandingly remarkable cultural resource values from disturbance associated with human traffic.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 7,010 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable cultural resource values.

Additional protection for the outstandingly remarkable cultural resource values would be supplied by the ongoing management activities described in Chapter II.

Management actions to protect the outstandingly remarkable cultural resource values provide that an archaeologist would review all proposals for new activities that could result in increased use or surface disturbance. In most cases, a cultural resource field inventory of the potentially affected area would be completed.

If sites are evaluated and determined as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.

If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

Additionally, protection measures, such as fencing or periodic patrolling, would be developed for specific cultural resources that have either a high level of significance or a history of vandalism. Selected areas along Burro Creek would be inventoried, with cultural resource project plans prepared for specific sites.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims could cause adverse impacts to outstandingly remarkable cultural resource values from surface disturbance, erosion and increased human traffic associated with these operations.

• Conclusion

There would be no adverse impacts on outstandingly remarkable cultural resource values on the 7,010 acres designated as Wild. The outstandingly remarkable values on 7,010 acres would benefit from special legislative protection under the Wild and Scenic Rivers Act.

The outstandingly remarkable cultural resource values on 1,300 nonsuitable acres could be adversely impacted by mineral development activities. Outstandingly remarkable cultural resource values on approximately 1,300 acres would not benefit from special protection under the Wild and Scenic Rivers Act or management prescriptions of the area of critical environmental concern.

Impacts on water quality.

The State of Arizona has designated Burro Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18, Chapter 11, 1992). In general, designation of Unique Water status is based on criteria of exceptional recreational or ecological significance, or the provision of critical habitat for threatened or endangered species. The state sets water quality standards that apply to designated Unique Waters.

Water quality monitoring sites have been established along Burro Creek to measure quality in compliance with state requirements. In the 7,010 acres designated Wild water quality would be maintained or improved in accordance with standards for Wild Rivers. Under the recommended alternative, water quality would be monitored along the portions of Burro Creek

on public land. The Unique Waters monitoring program would be continued.

Although not yet documented, the drainage of pollutants from abandoned mines on private land in the Burro Creek watershed could lead to a decline in water quality.

• Conclusion

Implementing the recommended alternative would not have a direct adverse impact on water quality.

Indirect adverse impacts on water quality could result from drainage of pollutants from abandoned mines on private land.

Impacts on mineral development.

Segment 3 and the area to its east, surrounding Bagdad, are characterized as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and Segments 1 and 2 have low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

Currently there is no gold mining activity in the area. A small gold mining operation once existed about four miles south of the Bureau of Land Management Burro Creek Recreation Site (segment 5, downstream of the U.S. Highway 93 bridge).

Approximately 129 active mining claims exist within two miles of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation. The Cyprus Bagdad open pit mine at Bagdad is a major copper producer. It mines ore from predominantly patented property.

According to the Kingman Resource Management Plan, the region surrounding the study area has no potential for oil, gas, coal, sodium, or other saline materials. There is a

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high potential for geothermal resources. GSA Resources operates the Burro Creek Clay Mine, an open pit saponite clay mine eight miles southwest of Bagdad in segment 3.

The minerals scenario projects the potential development of four small mines and two moderate-size mines in the next 20 years. These mines would cover 25 to 30 acres and employ an estimated 30 people. Up to eight miles of access roads would be built on public lands.

Under the recommended alternative, the 3,223 acres in the Upper Burro Creek Wilderness are already withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals because of the wilderness designation.

In accordance with the Wild and Scenic Rivers Act, an additional 4,260 acres designated as Wild outside the wilderness would be withdrawn from new mineral entry and closed to mineral leasing and material disposals. Another 673 acres would be withdrawn from new mineral entry in accordance with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. Bureau of Land Management approved mining plans of operations would be required for all mineral exploration and development activities above casual use on designated river segments and in the entire area of critical environmental concern.

Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 7,010 acres designated as Wild.

In accordance with the Wild and Scenic Rivers Act, the Bureau of Land Management would require that mineral development would be conducted so as to minimize surface disturbance, pollution, sedimentation, and visual impairment on 7,010 acres.

• Conclusion

There would be an adverse impact on mineral development from withdrawal of 4,260 acres in Wild segments outside Wilderness from new mineral entry and closure to mineral leasing and material disposals from implementation of the recommended alternative. The requirement for mining plans of operations, for all activities above casual use, could increase some of the costs associated with mineral development.

Impacts on the economic base and stability of Bagdad.

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment.

Bagdad's major economic activities are mining and education. In 1990 there were 736 people in the Bagdad civilian labor force, employed primarily by the Cyprus Bagdad Mine.

Two utility corridors, containing transmission facilities serving Bagdad, cross Burro Creek within the study area. Since these corridors are located in areas not proposed for designation, implementation of the recommended alternative would not affect the operation and maintenance or development of new utility lines in these corridors.

The recommended alternative would not affect expansion of the Cyprus Bagdad mining operation, upon which Bagdad's economy is based.

• Conclusion

There would be no adverse impacts on the economic stability of Bagdad from implementation of the recommended alternative.

Cumulative impacts of implementing the recommended alternative.

A cumulative impact is defined as the impact on

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined in a corridor approximately five miles on either side and both ends of the Burro Creek study area. Over most of the area, the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Upper Burro Creek Wilderness Area, the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, and the Kingman Resource Management Plan.

The cumulative impacts associated with multiple protective designations would beneficially affect the outstandingly remarkable values.

Irreversible and irretrievable commitments of resources involved in the recommended alternative.

Under the recommended alternative, resource management activities would be subject to the Wild and Scenic Rivers Act (on 7,010 acres), the Upper Burro Creek Wilderness Area, the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, and the Kingman Resource Management Plan.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the Wild and Scenic Rivers Act (on 7,010 acres), the Upper Burro Creek Wilderness Area, the Burro Creek Riparian and Cultural Area of Critical

Environmental Concern, and the Kingman Resource Management Plan.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The Burro Creek study area possesses outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

The all suitable alternative determines that all of the five segments of Burro Creek are suitable and recommends them to Congress for inclusion in the National Wild and Scenic Rivers System as follows:

Segment 1 (13.5 miles) as Wild

Segment 2 (8.5 miles) as Wild

Segment 3 (7.1 miles) as Recreational

Segment 4 (9.0 miles) as Wild

Segment 5 (13.5 miles) as Scenic.

Under the all suitable alternative, the outstandingly remarkable values would receive the protection of special legislation under the Wild and Scenic Rivers Act.

River management in the study area's 3,223-acre portion of the Upper Burro Creek Wilderness Area (all of segment 2 and small portions of segments 1 and 3) would comply with the provisions of the Wilderness Act.

Thirty-two percent (4,933 acres) of the study area is in the Burro Creek Riparian and Cultural

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Area of Critical Environmental Concern and would be managed under the provisions of the area of critical environmental concern plan.

Segment 3 and the area to its east, surrounding Bagdad, are classified as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and segments 1 and 2 have low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

Currently there is no gold mining activity in the area, but in the past gold was mined about four miles south of the Bureau of Land Management Burro Creek Campground (segment 5, downstream of the U.S. Highway 93 bridge).

Approximately 129 active mining claims exist within two miles of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation. The Cyprus Bagdad open pit mine at Bagdad is a major copper producer.

Impacts on outstandingly remarkable scenic values.

The outstanding scenic qualities consist of rugged volcanic landforms, deep canyons, colorful rock outcrops and layering, pools and waterfalls, slickrock areas, undeveloped shorelines, riparian vegetation, and abundant wildlife. Colorful volcanic deposits have drawn scientists and naturalists for research. Hot springs and significant obsidian deposits are part of the scenic and scientific diversity.

Outstanding scenic values would be protected, on 6,570 acres designated as Wild, by the prohibitions on new mineral entry, mineral leasing, and material disposals. These actions would protect the outstandingly remarkable scenic values from visual conflicts that may arise from mineral operations.

Mineral development on 9,460 acres would be conducted so as to minimize surface

disturbance and visual impairment. Prohibiting new roads and restricting motorized use would protect scenic values on segments designated Wild. These actions would serve to maintain existing conditions and in doing this would reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 6,570 acres designated as Wild would help protect the outstandingly remarkable scenic values.

New rights-of-way would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 9,460 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable scenic values.

The prohibition on construction of new dams and major diversions on up to 25.2 miles, in accordance with the Wild and Scenic Rivers Act, would further protect scenic values by retaining the waterway in the condition it was when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, the prohibition on new major utility corridors would protect scenic values by preserving the natural character of the landscape. Acquiring up to 6,042 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable scenic values on the acquired lands.

• Conclusion

There would be no adverse impacts to outstandingly remarkable scenic values on the 6,570 acres designated as Wild. A beneficial

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

Impact would result from long-term legislative protection of the outstandingly remarkable scenic values on 9,460 acres designated Wild, Scenic and Recreational.

Impacts on outstandingly remarkable recreational values.

The outstandingly remarkable recreational values are generated by the scenic qualities of the area. Burro Creek offers outstanding recreational opportunities for hiking, photography, sight-seeing, wildlife observation, swimming, and hunting. The Burro Creek campground allows the public to take advantage of these recreational opportunities in the areas adjacent to Highway 93. More primitive recreational opportunities are available in segment 1 and the Upper Burro Creek Wilderness Area.

The Bureau of Land Management Recreation Management Information System shows 22,350 visitor days during fiscal year 1992 in the Burro Creek Special Recreation Management Area that encompasses part of segments 4 and 5.

Outstanding recreational values would be protected, on 6,570 acres designated as Wild, by prohibitions on mineral entry, leasing, and material disposals. These actions would protect the outstandingly remarkable recreational values from visual conflicts that may arise from mineral operations.

Mineral development would be conducted so as to minimize surface disturbance and visual impairment. Prohibiting new roads and restricting motorized use would protect recreational values on 6,570 acres designated Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 9,460 acres designated as Wild, Scenic or Recreational would protect the outstandingly remarkable recreational values from overuse.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 9,460 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable recreational values.

The prohibition on construction of new dams and major diversions on up to 31 miles, in accord with the Wild and Scenic Rivers Act, would further protect recreational values.

Additional protection for the outstandingly remarkable recreational values would be supplied by the ongoing management activities described in Chapter II.

• Conclusion

There would be no adverse impacts to outstandingly remarkable recreational values. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable recreational values on 9,460 acres designated Wild, Scenic or Recreational.

Impacts on outstandingly remarkable fish and wildlife habitat values.

The Burro Creek study area has a highly diverse range of habitats and wildlife, with five native fish species, federally-listed and candidate species, and state-listed threatened species.

The five native fish species include Colorado River round-tailed chub, a special status species. Other native fish species in Burro Creek are longfin dace, speckled dace, Sonora suckers, and mountain suckers. Bald eagles and peregrine falcons are federally listed endangered species. The ferruginous hawk is a candidate category II species. Special status birds also include great egrets, snowy egrets, and western yellow-billed cuckoos.

Candidate category II reptiles and mammals

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

observed near Burro Creek are desert tortoises and California leaf nose bats. Candidate category II amphibian species along Burro Creek are Arizona Southwest toads and Yavapai leopard frogs.

The Arizona cliffrose, a federally-listed endangered species, exists on limy tuff soils on hillsides in the vicinity of segment 3.

Outstanding fish and wildlife habitat values would be protected, on 6,570 acres designated as Wild, by prohibitions on mineral entry, leasing, and material disposals. These actions would protect the outstandingly remarkable fish and wildlife habitat values from conflicts that may arise from mineral operations.

Mineral development would be conducted to minimize surface disturbance and pollution. Prohibiting new roads and restricting motorized use would protect fish and wildlife habitat values on 6,570 acres designated Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 9,460 acres designated as Wild, Scenic, or Recreational would protect the outstandingly remarkable fish and wildlife habitat values from human disturbance.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 9,460 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed to minimize adverse impacts on outstandingly remarkable fish and wildlife habitat values.

The prohibition on construction of new dams and major diversions on up to 31 miles, in accordance with the Wild and Scenic Rivers Act, would further protect fish and wildlife habitat values.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II, such as restrictions on activities near eagle nests.

• Conclusion

There would be no adverse impacts to outstandingly remarkable fish and wildlife habitat values. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable fish and wildlife habitat values on 9,460 acres designated Wild, Scenic or Recreational.

Impacts on outstandingly remarkable cultural resource values.

The westernmost known occurrence of multi-storied, stone masonry pueblos constructed and occupied sometime between A.D. 900-1200 by the people of the prehistoric Prescott Culture exists along upper Burro Creek. These sites are well preserved, some with standing walls eight feet high.

Further downstream, archaeological investigations have revealed that people in the prehistoric period grew corn along the creek, one of the few locations where farming was possible in this arid region of Arizona.

Other types of archaeological sites in the area include caves and rockshelters, artifact scatters, and petroglyph sites. Stone tools were manufactured from an important obsidian source near Burro Creek.

Outstanding cultural resource values would be protected, on 6,570 acres designated as Wild, by prohibitions on mineral entry, leasing, and material disposals. These actions would protect the outstandingly remarkable values from conflicts that may arise from mining operations.

Mineral development on 6,570 acres would be conducted so as to minimize surface disturbance. Prohibiting new roads and

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

restricting motorized use would protect cultural resource values on 6,570 acres designated Wild. These actions would serve to maintain existing conditions and in doing this reflect the goals of the Wild and Scenic Rivers Act.

Restricting recreational developments on 9,460 acres designated as Wild, Scenic, or Recreational would help protect the outstandingly remarkable cultural resource values from disturbance.

New rights-of-way in the Wild segments would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. On the 9,460 acres of public land recommended for designation, the Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable cultural resource values.

Additional protection for the outstandingly remarkable cultural resource values would be supplied by the ongoing management activities described in Chapter II.

Management actions to protect the outstandingly remarkable cultural resource values provide that an archaeologist would review all proposals for new activities that could result in increased use or surface disturbance. In most cases, a cultural resource field inventory of the potentially affected area would be completed.

If sites are evaluated and determined as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.

If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

Additionally, protection measures, such as fencing or periodic patrolling, would be developed for specific cultural resources that have either a high level of significance or a

history of vandalism. Selected areas along Burro Creek would be inventoried, with Cultural Resource Project Plans prepared for specific sites.

• Conclusion

There would be no adverse impacts on outstandingly remarkable cultural resource values from implementation of the all suitable alternative. The outstandingly remarkable values on 9,460 acres would benefit from special legislative protection under the Wild and Scenic Rivers Act.

Impacts on water quality.

The State of Arizona has designated Burro Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18, Chapter 11, 1992). In general, designation of Unique Water status is based on criteria of exceptional recreational or ecological significance, or the provision of critical habitat for threatened or endangered species. The state sets water quality standards that apply to designated Unique Waters.

Water quality monitoring sites have been established along Burro Creek to measure quality in compliance with State requirements.

Water quality would be maintained or improved in accordance with Bureau of Land Management standards on 9,460 acres of Wild and Scenic River segments.

Under the all suitable alternative, water quality would be monitored along the portions of Burro Creek on public land. The Unique Waters monitoring program would be continued.

Although not yet documented, the drainage of pollutants from abandoned mines on private land could lead to a decline in water quality causing an indirect adverse impact on fish and wildlife habitat.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

• Conclusion

Implementing the all suitable alternative would not have a direct adverse impact on water quality.

Possible indirect adverse impacts on water quality could result from drainage of pollutants from abandoned mines on private land.

Impacts on mineral development.

Segment 3 and the area to its east, surrounding Bagdad, are classified as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and segments 1 and 2 have low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

Currently there is no gold mining activity in the area, but in the past gold was mined about four miles south of the Bureau of Land Management Burro Creek Campground (segment 5, downstream of the U.S. Highway 93 bridge).

Approximately 129 active mining claims exist within a two-mile strip of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation.

The Cyprus Bagdad open pit mine at Bagdad is a major copper producer. It mines ore from predominantly patented property; only a small amount of public land is involved in this operation.

The region surrounding the study area has no potential for oil, gas, coal, sodium, or other saline materials. There is a high potential for geothermal resources.

GSA Resources operates the Burro Creek Clay Mine, an open pit saponite clay mine eight miles southwest of Bagdad in segment 3.

The minerals scenario provides for the

development of four small mines and two moderate-size mines in the next 20 years. These mines would cover 25 to 30 acres and employ an estimated 30 people. Up to eight miles of access roads would be built on public lands.

Under the all suitable alternative, the 3,223 acres in the Upper Burro Creek Wilderness are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals.

In accordance with the Wild and Scenic Rivers Act, an additional 3,820 acres designated as Wild outside the wilderness would be withdrawn from new mineral entry and closed to mineral leasing and material disposals. Another 1,130 acres would be recommended for withdrawal from new mineral entry in accordance with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. In addition on those 1,130 acres, an approved plan of operation would be required for all mineral exploration and development activities, mineral material disposals would be prohibited, and the Bureau of Land Management would stipulate no surface occupancy for mineral leases.

Mining plans of operations would be required for all operations above the level of casual use.

The 1,300 acres outside the wilderness area, segments designated as Wild, and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals.

Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 9,460 acres in accordance with the Wild and Scenic Rivers Act.

In accordance with the Wild and Scenic Rivers Act, the Bureau of Land Management would require that mineral development be conducted to minimize surface disturbance, pollution, sedimentation, and visual degradation on 9,460 acres.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

• Conclusion

There would be an adverse impact on mineral development from the withdrawal of 3,820 acres (in addition to the acres withdrawn in wilderness) from mineral entry and closure to mineral leasing and material disposals from implementation of the all suitable alternative.

Impacts on the economic base and stability of Bagdad.

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment.

Bagdad's major economic activities are mining and education. In 1990 there were 736 people in the Bagdad civilian labor force, employed primarily by the Cyprus Bagdad Mine.

Two utility corridors, containing transmission facilities serving Bagdad, cross Burro Creek in the study area. In accordance with the Wild and Scenic Rivers Act, new rights-of-way would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws. The Bureau of Land Management would require that new utility lines on public land be constructed to minimize adverse impacts on outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

Implementation of the all suitable alternative would not have a substantive impact on the city of Bagdad or the Cyprus Bagdad operations. There is a potential for minor adverse impacts associated with discouraging of new utility lines and requiring that facilities be constructed to minimize adverse impacts on outstandingly remarkable values.

However, existing water rights and rights-of-way would not be affected. New rights-of-ways could be permitted.

• Conclusion

There would be no adverse impacts on the economic stability of Bagdad from implementation of the all suitable alternative.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION/NOT SUITABLE ALTERNATIVE

The Burro Creek study area possesses outstandingly remarkable scenic, recreational, fish and wildlife habitat, and cultural resource values.

The no action alternative determines that the Burro Creek study area and should not be recommended for inclusion in the National Wild and Scenic Rivers System.

Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Under the no action alternative, the study area's 3,223-acre portion in the wilderness area would continue to be managed in accordance with provisions of the Wilderness Act.

Thirty-two percent (4,933 acres) of the study area is in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and would be managed under the provisions of the area of critical environmental concern plan.

On approximately 1,300 acres not included in the wilderness area or area of critical environmental concern, including all of the public land in segment 3, the outstandingly remarkable values would not receive special protection.

Segment 3 and the area to its east, surrounding Bagdad, are classified as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and segments 1 and 2 have

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low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

There is no gold mining activity in the area, but in the past gold was mined in an area about four miles south of the Bureau of Land Management Burro Creek Campground (segment 5, downstream of the Highway 93 bridge).

Approximately 129 active mining claims exist within two miles of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation. The Cyprus Bagdad open pit mine at Bagdad is a major copper producer.

Impacts on outstandingly remarkable scenic values.

The outstanding scenic qualities consist of rugged volcanic landforms, deep canyons, colorful rock outcrops and layering, pools and waterfalls, slickrock areas, undeveloped shorelines, riparian vegetation, and abundant wildlife. Colorful volcanic deposits have drawn scientists and naturalists for research. Hot springs and significant obsidian deposits are part of the scenic and scientific diversity.

Outstanding scenic values would be protected on 8,156 acres by prohibitions on new mineral entry and mineral material disposals. These acres include the wilderness area and the area of critical environmental concern. On 4,933 acres in the area of critical environmental concern, protection would be provided by plans of operation and the Bureau of Land Management would stipulate no surface occupancy for mineral leases.

Prohibitions on the construction of new roads and on motorized travel, subject to valid existing rights, would protect scenic values on 3,223 acres in the wilderness area. On the 4,933 acres in the area of critical environmental concern, scenic values would be protected by limiting off-highway travel to designated roads and trails.

The prohibition on developed campgrounds on 4,933 acres in the area of critical environmental concern would protect scenic values.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims, or new mineral material disposals, could cause adverse impacts to outstandingly remarkable scenic values from excavations, machinery, dust, noise, and new roads associated with these operations.

• Conclusion

On 8,156 acres, there would be no adverse impacts to outstandingly remarkable scenic values from the implementation of the no action alternative. These acres include the wilderness area and the area of critical environmental concern.

There is a potential for adverse impacts on scenic values from mineral development on 1,300 acres not under special protection by management prescriptions of the Upper Burro Creek Wilderness Area or the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

The outstandingly remarkable scenic values would not benefit from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable recreational values.

The outstandingly remarkable recreational values are associated with the scenic qualities of the area. Burro Creek offers outstanding recreational opportunities for hiking, photography, sight-seeing, wildlife observation, swimming, and hunting. The Burro Creek Recreation Site allows the public to take advantage of these recreational opportunities in the areas adjacent to Highway 93. More

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primitive recreational opportunities are available in segment 1 and the Upper Burro Creek Wilderness Area.

The Bureau of Land Management Recreation Management Information System shows 22,350 visitor days during Fiscal Year 1992 in the Burro Creek Special Recreation Management Area which encompasses part of segments 4 and 5.

Outstanding recreational values would be protected on 8,156 acres by prohibitions on new mineral entry and mineral material disposals. These acres include the wilderness area and the area of critical environmental concern. Mineral leasing would be prohibited on 3,223 acres in the wilderness area. On 4,933 acres in the area of critical environmental concern, additional protection would be provided because the Bureau of Land Management would stipulate no surface occupancy for mineral leases.

The prohibition on developed campgrounds on 4,933 acres in the area of critical environmental concern would not adversely impact the types of recreational uses known or expected to occur along Burro Creek.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims, or new mineral material disposals, could cause adverse impacts to outstandingly remarkable recreational values from excavations, machinery, dust, and noise associated with these operations.

• Conclusion

On 8,156 acres, there would be no adverse impacts on outstandingly remarkable recreational values from the implementation of the no action alternative. These acres include the wilderness area and the area of critical environmental concern.

There is a potential for adverse impacts on recreational values from mineral development on 1,300 acres not under special protection by management prescriptions of the Upper Burro Creek Wilderness Area or the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

The outstandingly remarkable values would not benefit from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable fish and wildlife habitat values.

The Burro Creek study area has a highly diverse range of habitats and wildlife, with five native fish species, federally-listed and candidate species, and state-listed threatened species.

The five native fish species include Colorado River round-tailed chub, a special status species. Other native fish species in Burro Creek are longfin dace, speckled dace, Sonora suckers, and mountain suckers. Bald eagles and peregrine falcons are federally-listed endangered species. The ferruginous hawk is a category II species. Special status birds also include great egrets, snowy egrets, and western yellow-billed cuckoos.

Category II reptiles and mammals observed near Burro Creek are desert tortoises and California leaf nose bats. Category II amphibian species along Burro Creek are Arizona southwestern toads and Yavapai leopard frogs.

The Arizona cliffrose, a federally-listed endangered species, exists on limy tuff soils on hillsides in the vicinity of segment 3.

Outstanding fish and wildlife habitat values would be protected on 8,156 acres by prohibitions on new mineral entry and mineral material disposals. These acres include the wilderness area and the Area of Critical Environmental Concern. Mineral leasing would be prohibited on 3,223 acres in the wilderness area. On 4,933 acres in the area of critical

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environmental concern, protection would be provided by approved plans of operations and because the Bureau of Land Management would stipulate no surface occupancy for mineral leases.

Prohibitions on the construction of new roads and on motorized travel, subject to valid existing rights, would protect fish and wildlife habitat on 3,223 acres in the wilderness area. On the 4,933 acres in the area of critical environmental concern, fish and wildlife habitat would be protected by limiting off-highway travel to designated roads and trails.

Under management prescriptions for the area of critical environmental concern, fish and wildlife habitat would be protected by restrictions on recreational activities, off-highway travel, road development, and helicopter flights in the vicinity of bald eagle nests.

In accordance with the Kingman Resource Management Plan, seasonal restrictions on livestock grazing, rotation of grazing, and measures including the construction of fences or alternate water sources would protect fish and wildlife habitat from damage by overgrazing.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims, or new mineral material disposals, potentially could cause adverse impacts to outstandingly remarkable fish and wildlife habitat values from soil erosion and increased stream turbidity, loss of natural vegetation, noise, and new roads associated with these operations.

The drainage of pollutants from abandoned mines on private land could lead to a decline in water quality causing an indirect adverse impact on fish and wildlife habitat.

• Conclusion

On 8,156 acres, there would be no adverse impacts to outstandingly remarkable fish and wildlife habitat values from the implementation of the no action alternative. These acres include the wilderness area and the area of critical environmental concern.

There is a potential for adverse impacts on fish and wildlife habitat values from mineral development on 1,300 acres not under special protection by management prescriptions of the Upper Burro Creek Wilderness Area or the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

The outstandingly remarkable values would not benefit from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable cultural resource values.

The rich natural resources associated with Burro Creek's riparian setting attracted prehistoric occupants.

The westernmost known occurrence of multi-storied, stone masonry pueblos constructed and occupied sometime between A.D. 900-1200 by the people of the prehistoric Prescott Culture exists along upper Burro Creek. These sites are well-preserved, some with standing walls eight feet high.

Further downstream, archaeological investigations have revealed that people in the prehistoric period grew corn along the creek, one of the few locations where farming was possible in this arid region of Arizona.

Other types of archaeological sites in the area include caves and rockshelters, artifact scatters, and petroglyph sites. The prehistoric people manufactured stone tools from obsidian collected near Burro Creek.

Management actions to protect the

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outstandingly remarkable cultural resource values provide that a cultural resource specialist would review all proposals for new activities that could result in increased use or surface disturbance. In most cases, a cultural resource field inventory of the potentially affected area would be completed.

If sites are evaluated and determined as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.

If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

Additionally, protection measures, such as fencing or periodic patrolling, would be developed for specific cultural resources that have either a high level of significance or a history of vandalism. Selected areas along Burro Creek would be inventoried, with Cultural Resource Project Plans prepared for specific sites.

Outstanding cultural resource values would be protected on 8,156 acres by prohibitions on new mineral entry and mineral material disposals. These acres include the wilderness area and the area of critical environmental concern. Mineral leasing would be prohibited on 3,223 acres in the wilderness area. On 4,933 acres in the area of critical environmental concern, protection would be provided by approved plans of operations and because the Bureau of Land Management would stipulate no surface occupancy for mineral leases.

- Conclusion

On 8,156 acres there would be no adverse impacts on outstandingly remarkable cultural resource values from implementation of the no action alternative.

The outstandingly remarkable values would not benefit from special legislative protection under the Wild and Scenic Rivers Act.

Impacts on water quality.

The State of Arizona has designated Burro Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18, Chapter 11, 1992). In general, designation of Unique Water status is based on criteria of exceptional recreational or ecological significance, or the provision of critical habitat for threatened or endangered species. The state sets water quality standards that apply to designated Unique Waters. Water quality monitoring sites have been established along Burro Creek to measure quality in compliance with state requirements.

Under the no action alternative, water quality would be monitored along the portions of Burro Creek on public land. The Unique Waters monitoring program would be continued.

Approximately 1,300 acres outside the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Most of this area has moderate to high mineral potential. The development of small mines on new claims, or new mineral material disposals, potentially could cause adverse impacts to outstandingly remarkable cultural resource values from soil erosion and increased stream turbidity, loss of natural vegetation, noise, and new roads associated with these operations.

The drainage of pollutants from abandoned mines on private land could lead to a decline in water quality causing an indirect adverse impact on fish and wildlife habitat.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

• Conclusion

Implementing the no action alternative would not have a direct adverse impact on water quality.

Possible indirect adverse impacts on water quality from drainage of pollutants from abandoned mines on private land.

Impacts on mineral development.

Segment 3 and the area to its east, surrounding Bagdad, are classified as having high mineral potential. These areas have produced copper, molybdenum, manganese, gold, and silver. Segments 4 and 5 have moderate to high mineral potential, and segments 1 and 2 have low to moderate mineral potential (Upper Sonoran Final Wilderness Environmental Impact Statement 1987).

Currently there is no gold mining activity in the area, but in the past gold was mined in an area about four miles south of the Bureau of Land Management Burro Creek Campground (segment 5, downstream of the U.S. Highway 93 bridge).

Approximately 129 active mining claims exist within two miles of the study area. About 20 of these claims are held by the Cyprus Bagdad Copper Corporation.

The Cyprus Bagdad open pit mine at Bagdad is a major copper producer. It mines ore from predominantly patented property; only a small amount of public land currently is involved in this operation.

The region surrounding the study area has no potential for oil, gas, coal, sodium, or other saline materials. There is a high potential for geothermal resources.

GSA Resources operates the Burro Creek Clay Mine, an open pit saponite clay mine eight miles southwest of Bagdad in segment 3.

The minerals scenario provides for the development of four small mines and two moderate-size mines in the next 20 years. These mines would cover 25 to 30 acres and employ an estimated 30 people. Up to eight miles of access roads would be built on public lands.

The 3,223 acres in the Upper Burro Creek Wilderness are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals.

Another 4,933 acres would be withdrawn from new mineral entry and material disposals in accordance with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. In addition, on those 4,933 acres, approval of a plan of operation would be required for all mineral exploration and development activities, mineral material disposals would be prohibited, and The Bureau of Land Management would stipulate no surface occupancy for mineral leases.

The 1,300 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals.

• Conclusion

There would be no adverse impacts on mineral development from implementation of the no action alternative.

Impacts on the economic base and stability of Bagdad.

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment.

Bagdad's major economic activities are mining and education. In 1990 there were 736 people in the Bagdad civilian labor force, employed primarily by the Cyprus Bagdad Mine.

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Two utility corridors containing transmission facilities serving the town of Bagdad cross Burro Creek within the study area. Implementation of the no action alternative would not impact the operation, maintenance, or development of new facilities within existing corridors.

- Conclusion

There would be no adverse impacts on the economic stability of Bagdad from implementation of the no action alternative.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Burro Creek Wild and Scenic River Suitability Environmental Impact Statement was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Statement began in January, 1993.

B. ELIGIBILITY

A determination was made in the Kingman Resource Management Plan (1993) that Burro Creek was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Kingman Resource Management Plan is on file at the Kingman Resource Area Office, Kingman, Arizona, and the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Burro Creek study area were held in Bagdad April 5, 1993, Kingman April 6, 1993, and Phoenix April 14, 1993. Ninety-five to 100 people attended the Bagdad meeting, 15 to 20 the Kingman meeting, and 55 to 60 were at the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson acted as project manager.

BURRO CREEK WILD AND SCENIC RIVER STUDY AREA

REFERENCES

Arizona Department of Environmental Quality

- 1992 Title 18: Environmental Quality. Chapter II: Water Quality Boundaries and Standards. State of Arizona, Phoenix.

Arizona Rivers Coalition

- 1991 Arizona Rivers: Lifeblood of the Desert. A Citizens Proposal for the Protection of Rivers in Arizona.

U.S. Bureau of Land Management

- 1993 Kingman Resource Area Proposed Resource Management Plan and Final Environmental Impact Statement. Kingman Resource Area, Phoenix District Office.

U.S. Bureau of Land Management

- 1985 Unique Waters Nomination for Burro Creek and Francis Creek. Prepared by the Phoenix District Office and the Arizona Department of Health Services, Phoenix.

U.S. Bureau of Land Management

- 1987 Upper Sonoran Final Wilderness Environmental Impact Statement. Arizona State Office, Phoenix.

U.S. Geological Survey

- 1992 Water Resources Data, Arizona Water Year 1991. U.S. Geological Survey Water-Data Report AZ-91-1. Water Resources Division, Tucson.

**CIENEGA CREEK
WILD AND SCENIC RIVER STUDY AREA**

**TUCSON RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

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CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Cienega Creek were identified in the Safford Resource Management Plan Amendment (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of Cienega Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF THE STUDY AREA

The Cienega Creek Wild and Scenic River Study Area is located 45 miles southeast of Tucson, Arizona, in Pima County and Santa Cruz County. Cienega Creek drains most of the east slopes of the Santa Rita Mountains, the west slopes of the Whetstone Mountains, and a small oak woodlands area south of the town of Sonoita, Arizona.

The Cienega Creek Wild and Scenic River Study Area contains 10.5 river miles, of which 10 are managed by the Bureau of Land Management. One-half mile is State of Arizona land. The study area extends out 0.25 miles from the mean annual high water mark shoreline on either side. The 10.5 mile total includes 8.5 miles along Cienega Creek, 1.0 miles along Mattie Canyon, and 1.0 miles along Empire Gulch.

Two segments of Cienega Creek were determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management because the river is free-flowing and has outstandingly remarkable essential habitat for the Gila topminnow

(*Poeciliopsis occidentalis occidentalis*), federally-listed as endangered. The U.S. Fish and Wildlife Service has determined that Cienega Creek is critical habitat for the Gila topminnow. Both river segments have been tentatively classified as Scenic.

Segment 1 includes 3.0 miles along Cienega Creek and 1.0 miles along Empire Gulch where this tributary enters Cienega Creek. Segment 2 includes 5.5 miles of Cienega Creek and 1.0 miles of Mattie Canyon where it enters Cienega Creek.

The creek flows north through the basin between the Santa Rita and Whetstone Mountains, with year-round surface water along about 13.5 miles of its 30-mile reach. All but three miles of this surface flow is on public lands in the Empire/Cienega Resource Conservation Area.

Two tributaries, Empire Gulch and Mattie Canyon, contribute year-round flow to Cienega Creek with the conservation area. Draining north, Cienega Creek enters Pantano Wash, an important contributor of flood waters to the Rillito/Santa Cruz River system in the Gila River Watershed.

The Bureau of Land Management acquired the public lands in the study area as a result of a 1988 land exchange. Public lands in the area are managed by the Tucson Resource Area under the Safford District Resource Management Plan (1993) and amendments. There are public, private, and state-owned lands adjacent to the study area.

The river is located in Arizona's Basin and Range physiographic province. Outside the riparian area the vegetation is typical of a semidesert grassland and a Madrean evergreen woodland. As the name implies, Cienega Creek is marshy, with cattails and tall grasses. There are mesquite bosques and riparian forests of cottonwoods, willows, and ash.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

The area is readily accessible by roads. State Highway 82 crosses the study area and several dirt roads provide access to the creek at various locations.

Although the study area has been used for farming, ranching, mining, and recreational activities, it generally retains its natural appearance.

**TABLE CC-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

CIENEGA CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	10.0	0.5	0	10.5
PERCENT	95.2	4.8	0	100.0
TOTAL ACRES	3,200	160	0	3,360
PERCENT	95.2	4.8	0	100.0
SUBSURFACE MINERALS ACRES	3,200	160	0	3,360

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The Phoenix and Safford Districts realigned their boundaries in 1991. Each district also adopted appropriate portions of the other district's resource management plan. Administrative responsibilities for the Cienega Creek study area were transferred from the Phoenix District to the Safford District/Tucson Resource Area at that time.

The Bureau of Land Management manages the region under general guidance in the Safford

District Resource Management Plan (1993). An amendment to the Safford District Resource Management Plan was initiated in 1993 to provide management guidance for the Empire/Cienega Resource Conservation Area.

The entire Cienega Creek study area is in the Empire/Cienega Resource Conservation Area. There is no designated wilderness in the study area.

Wildlife populations and habitats are managed according to the interim management guidelines in the Phoenix District Resource Management Plan.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE CC-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE CIENEGA CREEK
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS.**

CIENEGA CREEK RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Interim Protective Management (Initiated June 1988) pending development of a land-use plan	3,200	100.0

2. U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service has responsibilities under the Endangered Species Act to recover threatened or endangered wildlife species and their native habitats.

3. State of Arizona

The State of Arizona Department of Water Resources is responsible for allocating and maintaining records of water rights. The Arizona Game and Fish Department is responsible for managing wildlife populations throughout the state. The Arizona State Land Department is responsible for managing lands owned by the State of Arizona. There are 160 acres of state land in the study area.

4. Local Government

The study area is in Santa Cruz County and Pima County. The communities of Patagonia, Sonoita, and Elgin, Arizona are within 20 miles of the study area.

5. Private

There is no private land in the Cienega Creek Study area.

D. SCOPING

Scoping meetings specifically highlighting the Cienega Creek Wild and Scenic Study Area were held in Tucson April 13 and Sonoita April 23, 1993. Thirty-five to 40 people attended the

Tucson meeting and 10 attended the Sonoita meeting.

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the Cienega Creek study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impact on potential commercial and residential development in towns and cities
- Impact on mineral development
- Impact on water rights
- Impact on federally-listed or candidate species
- Impact on recreation opportunities
- Impact on riparian resource values
- Impact on air quality
- Impact on the outstandingly remarkable fish and wildlife habitat values

Issues Considered but not Addressed

- Impact on mineral development

The Cienega Creek study area has no known potential for locatable minerals. There are no mining claims in the area and the area is withdrawn from locatable mineral entry and closed to oil and gas leasing and mineral material sales.

This issue will not be discussed further.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

- Impact on potential commercial and residential development in towns and cities

Congressional action to designate or not designate wild and scenic rivers would have no direct impacts on potential commercial, agricultural, or residential development in towns and cities.

The Bureau of Land Management has no authority over nonfederal land and only can address the public land it administers. In wild and scenic river administration the management protection would be applied to the entire river study area except 160 acres of State of Arizona lands.

Congressional action to include the Cienega Creek in the National Wild and Scenic Rivers System would not affect the use of private property. Designation does not open private lands to public access. The right to buy and sell property would not be affected.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- Impact on water rights

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act

on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

Stream flow data already gathered indicates an average flow of about 2.0 cfs. This data would form the basis of justification to accompany a new instream flow application to be filed with the State of Arizona in early 1994. The previous owner of the property submitted documentation to the Arizona Department of Water Resources and to the adjudication court to substantiate their water right claims. These claims include the entire length of Cienega Creek, Empire Gulch and Mattie Canyon. Claimed were varying quantities of water for livestock and general ranch use. The need to sustain streamflow to support the endangered Gila topminnow and other native fish and habitat has been identified by the Bureau of Land Management.

This issue will not be discussed further.

- Impact on federally-listed or candidate fish and wildlife species.

The Endangered Species Act requires the Bureau of Land Management, in consultation

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out would not jeopardize the continued existence of any federally-listed species.

This issue will be discussed under outstandingly remarkable fish and wildlife habitat values.

- Impact on air quality

The implementation of the management actions associated with any of the alternatives would not have impacts on air quality in the Cienega Creek study area because there would be no surface disturbance or development that would release particulate matter.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft environmental impact statement to determine the areas of major concern. The team, together

with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

As a result of comments at the public hearings and letters on the draft Cienega Creek Study Area Legislative Environmental Impact Statement, Bureau of Land Management personnel reconsidered the proposed action for Cienega Creek.

In August, 1994 the State Director approved a change in the proposed action wherein the all suitable alternative discussed in the 1993 Suitability Assessment was identified as the recommended alternative in the final Cienega Creek Study Area Legislative Environmental Impact Statement.

The remaining portion of the document reflects this change.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Cienega Creek study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities that may occur either because of wild and scenic river designation or the area being returned to multiple use management.

The following alternatives are analyzed:

Recommended alternative
No action alternative

B. RECOMMENDED ALTERNATIVE (ALL SUITABLE)

The recommended alternative determines that all of the two segments of the ten mile Cienega Creek study area are suitable and recommends them to Congress as suitable for designation with a Scenic classification.

The following summarizes selected management actions.

Wild and Scenic River management actions

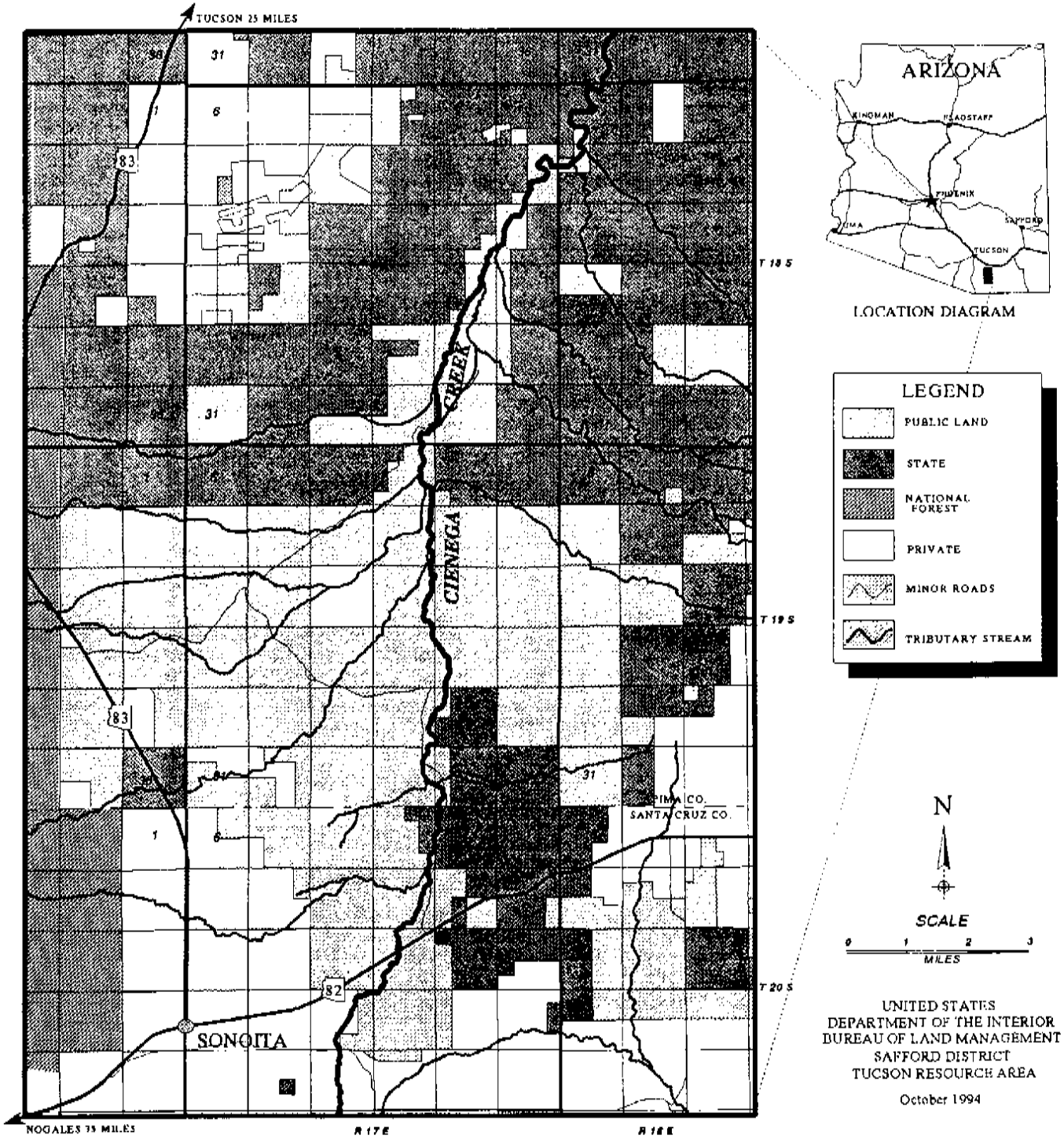
Wild and Scenic River designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would be initiated for a Scenic River designation. Where

there might be overlap with ongoing actions, the more stringent action would apply.

- New transmission lines, natural gas lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way.
- New hydroelectric power facilities would be prohibited. Flood control dams and levees would be prohibited. Water supply dams and major diversions would be prohibited. Maintenance of existing facilities and construction of some new structures would be permitted.
- Roads or trails would be allowed.
- Motorized travel would be permitted if there was no impairment of outstandingly remarkable values.
- Moderately sized campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged in river areas classified as Scenic but public use and access may be regulated to protect and enhance scenic river values.
- Wood cutting would not be allowed. Cutting of dead and down wood would be limited. Restrictions on use of wood for fuel could be prescribed.
- No future water developments are planned.
- Water quality would be maintained or improved.
- Livestock grazing use would be permitted.

CIENEGA CREEK

(Recommended Alternative)



CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

- Instream flow would be quantified. An assessment would be initiated to secure instream flows to protect outstandingly remarkable values.

Ongoing management actions

Other existing management actions in the Cienega Creek study area would continue. The following are selected management actions from the Safford District Resource Management Plan, Interim guidance (adopted by the Safford District from the Phoenix Resource Area Management Plan), Bureau of Land Management Manuals regarding public safety and road maintenance, and actions required by other laws and regulations (Endangered Species Act, Historic Preservation Act).

- Nonfederal lands would be acquired by exchange on a willing seller-willing buyer basis
- Mineral entry is prohibited since the study area lands have never been open to mineral development.
- Cutting of fuelwood is not authorized.
- No future water developments are planned.
- Riparian pastures are being developed in the spring-use areas.
- Crop farming is not authorized.
- Preliminary planning is underway to restore the natural riparian systems in the area.
- The road near the upstream end of the agricultural area may be altered from a culvert-type crossing to a low water crossing.
- There are preliminary plans to reroute the road to reduce creek crossings.
- Hazardous roads would be closed.
- If necessary, actions to prevent exotic fish species from entering the creek, or to eliminate existing exotic species from the creek, would be taken in cooperation with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service.
- For prevention of erosion, measures would be developed to reduce or prevent headcutting of washes. This would stabilize soils and improve water quality in Cienega Creek.
- All structures within Cienega Creek would be evaluated for potential removal to improve available fish habitat.
- Two dirt water-diversion structures in Cienega Creek that have caused a 1.4-mile stretch of the creek to dry up would be removed, increasing the amount of available fish habitat.
- All proposals for new activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

C. NO ACTION ALTERNATIVE

The no action alternative determines that the entire Cienega Creek study area is not suitable and does not recommend it for designation. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Provisions appropriate to specific management actions associated with implementation of the no action alternative are as follows.

Wild and Scenic River management actions

Under the no action alternative there would be no wild and scenic river designation.

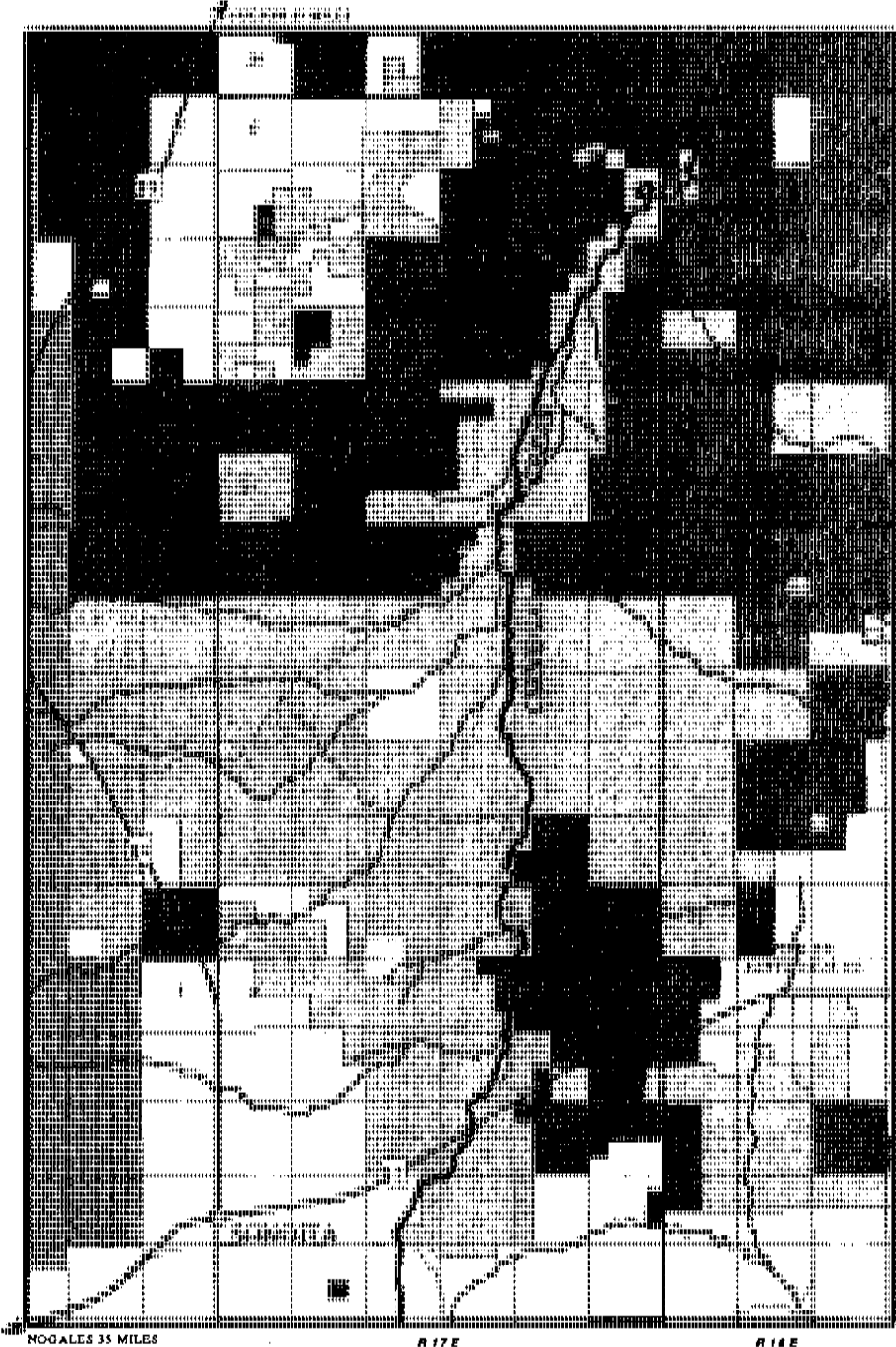
Ongoing management actions

The following management actions are in accordance with the Safford District Resource Management Plan, interim guidance (adopted by the Safford District from the Phoenix Resource Area Management Plan), Bureau of Land Management manuals regarding public safety and road maintenance, and actions required by other laws and regulations (Endangered Species Act, Historic Preservation Act).

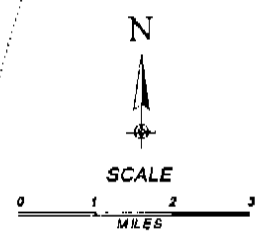
- Nonfederal lands would be acquired by exchange on a willing seller-willing buyer basis.
- Cutting of fuelwood is not authorized.
- No future water developments are planned.
- Riparian pastures are being developed in the spring-use areas.
- Crop farming is not authorized.
- Preliminary planning is underway to restore the natural riparian systems in the area.
- The road near the upstream end of the agricultural area may be altered from a culvert-type crossing to a low water crossing.
- There are preliminary plans to reroute the road to reduce creek crossings.
- Hazardous roads would be closed.
- If necessary, actions to prevent exotic fish species from entering the creek, or to eliminate existing exotic species from the creek, would be taken in cooperation with the Arizona Game and Fish Department and the U.S. Fish and Wildlife Service.
- For prevention of erosion, measures would be developed to reduce or prevent headcutting of washes. This would stabilize soils and improve water quality in Cienega Creek.
- All structures within Cienega Creek would be evaluated for potential removal to improve available fish habitat.
- Two dirt water diversion structures in Cienega Creek that have caused a 1.4-mile stretch of the creek to dry up would be removed, increasing the amount of available fish habitat.
- All proposals for new activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

CIENEGA CREEK

(No Action Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
TUCSON RESOURCE AREA
October 1994

NOGALES 35 MILES

R 17 E

R 18 E

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

D. ALTERNATIVES CONSIDERED BUT REJECTED

An alternative suggested by the Arizona Rivers Coalition proposed designation of a 14-mile stretch of Cienega Creek. This was considered but rejected because the Bureau of Land Management eligibility study did not find that the 14-mile stretch met the free-flowing criterion necessary for an eligibility determination.

Therefore, this alternative is not considered in this document.

An alternative was suggested that would exclude private lands from suitability consideration. There are no private lands within the study area. The recommended alternative to recommend that Congress designate Cienega Creek under the Wild and Scenic River Act is based on the assumption that there would be no direct impacts on potential commercial, agricultural, or residential development in towns and cities.

The Bureau of Land Management has no authority over nonfederal land and can address only the public land it administers. In wild and scenic river administration the management

protection would be applied to the entire river study area except 160 acres of State of Arizona lands.

Congressional action to include the Cienega Creek in the National Wild and Scenic Rivers System would not affect the use of private property. Designation does not open private lands to public access. The right to buy and sell property would not be affected.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

No other alternatives were suggested by the public or the Bureau of Land Management.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE CC-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative	No action alternative
Outstandingly Remarkable Fish and Wildlife Habitat	Long-term legislative protection under the Wild and Scenic River Act and Endangered Species Act.	No adverse impact; Protection under Endangered Species Act. No long-term legislative protection under the Wild and Scenic River Act
Recreation	Some increase in visitor use. Minor adverse impact	No adverse impact on recreational uses
Riparian Vegetation	Minor adverse impact from increased visitor use	No adverse impact on vegetation

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Cienega Creek study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Safford District Resource Management Plan Amendment (1993) and the Cienega Creek suitability determination assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUE

Both segments of the river are free-flowing and have outstandingly remarkable habitat for the Gila topminnow, federally-listed as endangered. The U.S. Fish and Wildlife Service has determined that Cienega Creek is critical habitat for the Gila topminnow. Cienega Creek system contains the largest population of the species in the United States and is one of only nine remaining natural populations in Arizona. Because of its importance to the Gila topminnow and the absence of exotic fish species, Cienega Creek has received top priority for protection by the Desert Fishes Council, an organization of wildlife biologists.

B. MINERALS

The Intermountain basin through which Cienega Creek and its tributaries flow is filled with Quaternary deposits of alluvial and colluvial soils and gravels derived from the surrounding highlands. Cienega Creek in its meandering through the Sonora Valley has deposited gravels that are widely distributed throughout the valley substrata. The area is characterized by gently sloping, dissected alluvial fans and a nearly level, broad valley floor. The aspect changes from rolling grass plains at the headwaters south of Sonora to steep, rocky canyons at the north end.

The probability of finding valuable aggregate

type gravel deposits is good given the high quartz content of the parent rock. Development potential is low due to the hauling distances involved and the existence of similar materials in more favorable locations.

Mining occurred in the Empire Mountains for lead, zinc, silver, molybdenum, manganese, vanadium, copper, and gold. The Bureau of Mines has classified an area in the Empire Mountains as high to moderately favorable for locatable minerals. The moderately favorable area lies approximately 1.5 miles north of Cienega Creek.

No locatable minerals are known to exist along Cienega Creek or its tributaries in the study area. Currently there are no mining claims in the study area, which is closed to new location. The probability of finding valuable oil and gas deposits appears low.

C. LANDS

The Arizona Electric Power Cooperative 115 kV Pantano-Kartchner powerline and the Tucson Electric Power Company 138 kV line run parallel to each other and cross Cienega Creek at the northern (downstream) end of the study area. Access to these lines is via a maintained gravel road that crosses Cienega Creek in four places just south of the area known as the Narrows.

There are no private lands or developments in the study area.

D. RECREATION

Recreational activities that occur in the study area include wildlife observation, picnicking, photography, horseback riding, hiking, hunting, and camping. Recreation use is low to moderate with estimates at 2,500 annual visitor days.

Scenic quality varies considerably along the

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

length of Cienega Creek. River landscape features include riffles and swift runs, tall cutbanks, deep clear pools, steep and rocky narrows with small waterfalls, and a narrow but diverse riparian gallery. Limited areas along the creek suffer visual degradation from past agricultural practices.

Arroyo cutting, abandoned diversion structures, badlands topography, old dumps, and mesquite bosques that have been cut are present but do not detract from the overall scenic quality.

The lower portion of Mattie Canyon near its junction with Cienega Creek is very scenic. This clear stream is perennial through this area and flows swiftly over a bed of rounded cobbles and beneath a canopy of tall trees.

Tall, vertically incised cutbanks box in the lower reaches of the canyon and impart a sense of isolation. As a counterpoint to the vast, open rangelands that surround it, this portion of the canyon serves the recreational needs of those visitors looking for more intimate surroundings.

A one mile segment of Empire Gulch located near the historic Empire Ranch headquarters consists of a visually spectacular Fremont cottonwood (Populus Fremontii) gallery. Water from a spring creates the first perennial flow in the upper portion of this drainage.

This portion of Empire Gulch is a popular orientation, sightseeing, and picnicking stop for visitors to the Bureau of Land Management's Empire Ranch.

E. WILDLIFE

Cienega Creek supports native fish populations that are uncontaminated by exotic fish species. Cienega Creek provides habitat for the Gila topminnow, listed as endangered by the U.S. Fish and Wildlife and as threatened by the State of Arizona. The U.S. Fish and Wildlife Service has determined that Cienega Creek is critical habitat for the Gila topminnow. The creek

contains the largest population out of the nine known remaining natural populations. The river also provides habitat for two other native fish species; the Gila chub (Gila intermedia), a candidate for federal listing, and the longfin dace (Agosia chrysogaster), a common and widely distributed species.

The U.S. Fish and Wildlife Service has data that indicates that the study area is habitat for the lesser long-nosed bat (Leptonycteris curasoae verbabuena) and American peregrine falcon (Falco peregrinus anatum), two species listed as endangered, and the southwestern willow flycatcher (Empidonax tralli extimus), proposed for endangered status.

The creek is listed number one for protection by the Desert Fishes Recovery Team, an organization of wildlife biologists from universities, private groups, and state and federal agencies.

The entire area is prime wildlife habitat and diverse populations of game and nongame animals and birds are found throughout the area.

Federal candidate species found along the study area include the Mexican garter snake (Thamnophis eques), canyon spotted whiptail (Cnemidophorus burti), Sonoran tiger salamander (Ambystoma tigrinum stebbinsi), yellow-nosed cotton rat (Sigmodon ochrognathus), California leaf-nosed bat (Macrotus californicus), Mexican long-tongued bat (Choeronycteris mexicana), loggerhead shrike (Lanius ludovicianus), ferruginous hawk (Buteo regalis - wintering only), and lowland leopard frog (Rana yavapaiensis). Other amphibians such as the canyon tree frog (Hyla arenicolor) occur in the area. Reptiles include Gila monsters (Heloderma suspectum suspectum), great plains skink (Eumeces obsoletus) and rattlesnakes.

Great blue herons (Ardea herodias), Virginia rails (Rallus limicola), numerous species of

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songbirds, Gambel's quail (Callipepla gambelii), scaled quail (Callipepla squamata), and Mearns' or Montezuma's quail (Cyrtonyx montezumae) and a variety of raptorial birds such as the rare gray hawk (Buteo nitidus) use the area for nesting and foraging.

Other rare bird species that use the area are yellow-billed cuckoo (Coccyzus americanus), Baird's sparrow (Ammodramus bairdii), Sprague's pipit (Anthus spragueii), and the northern beardless tyrannulet (Camptostoma imberbe).

Large and small game animals depend on riparian areas as important sources of food and shelter. Mule deer (Odocoileus hemionus), white-tailed deer (Odocoileus virginianus), and javelina (Pecari anculatus) are found along these waterways. Predators include bobcats (Lynx rufus), coyotes (Canis latrans), and an occasional mountain lion (Felis concolor) and an occasional black bear (Ursa americanus). Pronghorns (Antilocapra americanus) were once common in the area but were extirpated long ago, then reintroduced in 1981.

F. VEGETATION

Vegetation of the study area watershed is predominantly in the Semidesert Grasslands Biotic Community in the 12-16 inch precipitation zone. These semidesert grasslands are perennial grass-shrub dominated rangelands positioned between the desertscrub type below and the plains grassland and evergreen woodlands above.

Characteristic perennial grass species include black grama, sideoats grama, hairy grama, sprucetop grama, plains lovegrass, cane beardgrass, threeawns, curly mesquite and big sacaton. These grasses are mixed with yuccas, agaves, beargrass and sotol, and, in some area invasions of mesquite. Common shrubs occurring in varying densities are burweed, whitethorn acacia, mormon tea, and wolfberry.

The riparian vegetation along the creek is in the Cottonwood-Willow series of the Southwestern Riparian Deciduous Woodland Biotic Community. The dominant species are Fremont cottonwood and Goodding willow. Velvet ash and Arizona walnut occur sporadically along the entire stretch of the creek, but are more common along the northern end in the deeper, rocky canyon bottoms.

The U.S. Fish and Wildlife Service has data that indicate the study area may be habitat for the Huachuca water umbel (Lilaeopsis schaffneriana recurva).

Because the riparian areas have not been segregated from the sacaton pastures, livestock have had access to the riparian area during the spring and summer, reducing the amount of regeneration of native riparian vegetation.

Some marsh (cienega) habitat is evident along Cienega Creek, Empire Gulch, and Mattie Canyon. These areas support cattail, rushes and reeds, sedges, water parsnip, pondweeds and various other wetland plants.

Mesquite woodlands (bosques) occur on loamy sites along stream terraces and in the major drainages leading to the creek. Almost pure stands of big sacaton occur on the level, subirrigated floodplain next to Cienega Creek and its major tributaries. In those reaches of the creek where downcutting of the channel has occurred, the lowered water table has allowed mesquite to encroach into these highly productive grass bottomlands.

G. CULTURAL RESOURCES

The Cienega Creek area has been inhabited for approximately 5,000 years. A late archaic pithouse village, located in lower Mattie Canyon, produced evidence of a hunting and gathering subsistence, possible supplemented by agriculture.

By 500 A.D., the Hohokam, an agricultural

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people, had entered the area and occupied the terraces along major washes. For the following millennium populations expanded along the terraces and floodplains of Cienega Creek and its major tributaries. Large pithouse villages occupy the more attractive portions of the valley.

There is little evidence of human occupation in the area from around 1450 until the Arizona territory period, although it is known that Apaches lived in the area. Cattle and sheep ranching began in the mid-1860s on what eventually became known as the Empire Ranch when it was purchased by Walter Vail in 1876. The ranch covered over 1,000 square miles during its peak. The original ranch house, outside the study area, is listed on the National Register of Historic Places.

Cultural resources include a dense inventory of archeological sites along the banks of Cienega Creek and Mattie Canyon. Two sites dated from pollen samples have yielded evidence of a transition by early human inhabitants of the area from a hunting and gathering lifestyle to one based on maize agriculture.

H. WATER RESOURCES

Streamflow data already gathered indicates an average flow of about 2.0 cfs. These data would form the basis of justification to accompany a new instream flow application to be filed with the State of Arizona in early 1994. The previous owner of the property submitted documentation to the Arizona Department of Water Resources and to the adjudication court to substantiate their water right claims. These claims include the entire length of Cienega Creek, Empire Gulch, and Mattie Canyon. Claimed were varying quantities of water for livestock and general ranch use. The need to sustain streamflow to support the endangered Gila topminnow and other native fish and habitat has been identified by the Bureau of Land Management.

The Safford District has also received a Certificate of Water Right for a quantity of irrigation water from Cienega Creek.

Structures that divert water for agriculture create a 1.4-mile long segment of Cienega Creek that is dry. Groundwater recharge below the agricultural area reestablishes the creek's flow.

I. LIVESTOCK GRAZING

The grazing allotment encompasses approximately 72,500 acres, about half of which is public land managed by the Bureau of Land Management. The other half is owned by the State of Arizona. The entire river study area except about one-half mile at the northern end is located on public land administered by the Bureau of Land Management.

The allotment (#6090) is currently leased to an operator authorized to graze 1,500 cattle yearlong. It is a cow/calf operation and is managed as a one herd, flexible rotation system. The northern end of Cienega Creek is grazed only in the winter, and the southern end is grazed in the spring and early summer when the sacaton grass is actively growing.

Several livestock enclosures in the northern end of the study area have been constructed. The Bureau of Land Management and the permittee are working to develop riparian pastures in the spring use areas to provide rest during the critical spring and summer growing season.

Because the riparian areas have not been segregated from the sacaton pastures, livestock have had access to the riparian area during the spring and summer, reducing the amount of regeneration of native riparian vegetation.

Currently, no cutting of fuelwood is authorized and harvest of vegetative products is restricted to collection of dead and down firewood for campfires. The irrigation canal and diversion dams associated with the historic agricultural use are in disrepair.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Cienega Creek study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated Wild and Scenic River.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative determines that the two segments (3,200 acres) totaling 10.5 miles of Cienega Creek are suitable and recommends them for designation as Scenic.

Under the recommended alternative the Cienega Creek study area outstandingly remarkable fish and wildlife habitat value would receive special long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Fish Habitat Value

The outstandingly remarkable fish habitat values would be subject to the effects of actions allowable under the interim protective management status.

In the implementation of the wild and scenic river management actions for the remarkable fish habitat value, water quality would be maintained or improved along the 10 miles of

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the creek. Flood control dams and levees would be prohibited. Water supply dams and major diversions would be prohibited.

New transmission lines, natural gas lines would be discouraged on the 3,200-acre study area. This would prevent any conflict that may be created between habitat improvement efforts and either routine or emergency maintenance of transmission lines. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way.

Instream flow would be quantified. An assessment would be completed to secure instream flows to protect outstandingly remarkable values.

Additional protection for the outstandingly remarkable fish habitat values would be supplied by the ongoing management activities described in Chapter II. For example, efforts to restore the natural riparian system are planned. When these plans are developed and implemented the outstandingly remarkable fish habitat values would benefit. These efforts to improve the fish habitat would positively benefit Gila topminnow and other native fish species. Riparian pastures are being developed in the spring-use grazing areas. Crop farming is not authorized. These management actions would protect the outstandingly remarkable fish habitat value.

• Conclusion

Under the recommended alternative the outstandingly remarkable fish habitat values would receive special legislative protection.

Implementation of the management actions associated with the recommended alternative would have no adverse impacts on fish habitat values.

Impacts on Recreation Opportunities

Recreational activities that occur in the study area include wildlife observation, picnicking, photography, horseback riding, mountain-biking, hiking, hunting, and camping.

Scenic quality varies considerably along the length of Cienega Creek. River landscape features include riffles and swift runs, tall cutbanks, deep clear pools, steep and rocky narrows with small waterfalls, and a narrow but diverse riparian gallery. A one-mile segment of Empire Gulch located near the historic Empire Ranch headquarters consists of a visually spectacular Fremont cottonwood gallery. This portion of Empire Gulch is a popular orientation, sightseeing, and picnicking stop for visitors to the Bureau of Land Management's Empire Ranch.

Ongoing management actions would protect recreation opportunities. For example, the road near the upstream end of the agricultural area may be altered from a culvert-type crossing to a low water crossing. There are preliminary plans to reroute the road to reduce creek crossings. Hazardous roads would be closed.

Visitor use data is not available, but estimates are for fewer than 2,500 annual visitor use days. If Cienega Creek is designated as a wild and scenic river visitor use could increase. However, there is no way to estimate what type of increase would occur. It is likely to be minimal.

• Conclusion

Implementation of the management actions associated with the recommended alternative could have minor adverse impacts on recreation.

Impacts on Riparian Vegetation

The riparian vegetation along the creek is in the Cottonwood-Willow series of the Southwestern

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Riparian Deciduous Woodland Biotic Community. The dominant species are Fremont cottonwood and Goodding willow. Velvet ash, and Arizona walnut occur sporadically along the entire stretch of the creek, but are more common along the northern end in the deeper, rocky canyon bottoms.

Some marsh (cienega) habitat is evident along Cienega Creek, Empire Gulch, and Mattie Canyon. These areas support cattail, rushes and reeds, sedges, water parsnip, pondweeds and various other wetland plants.

Under the recommended alternative the ongoing management actions would protect riparian vegetation. For example, riparian pastures are being developed in the spring-use grazing areas. Crop farming is not authorized. Preliminary planning is underway to restore the natural riparian systems in the area. For prevention of erosion, measures would be developed to prevent headcutting of washes. These would stabilize soils and improve water quality in Cienega Creek. All structures within Cienega Creek would be evaluated for potential removal to improve available fish habitat. In addition, two dirt water-diversion structures in Cienega Creek that have caused a 1.4 mile stretch of the creek to dry up would be removed, increasing the amount of available fish habitat.

Increases in recreational use because of designation and wild and scenic river publicity would have a minor adverse impact on riparian vegetation. Recreation management would prevent major impairment, but increased visitor use would be accompanied by trash and trampling.

• Conclusion

There would be minor adverse impacts from implementation of the recommended alternative due to increased recreational use.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions despite what agency (Federal or non-Federal) or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Cienega Creek study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are consistent with existing management regulations and constraints associated with the area.

• Conclusion

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints that apply to these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative no new mineral entry would be allowed, and resource management activities would be subject to the applicable management plans.

• Conclusion

There are no irreversible or irretrievable commitments of resources.

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Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the Cienega Creek Interim management.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

The no action alternative determines that the entire Cienega Creek study area is not suitable and recommends it for nondesignation. Its outstandingly remarkable fish and wildlife habitat value would not receive special legislative protection under the Wild and Scenic Rivers Act.

Impacts on the Outstandingly Remarkable Fish Habitat Value

The outstandingly remarkable fish and wildlife habitat values would be subject to the effects of actions not allowable under the interim protective management status.

Cienega Creek provides outstandingly remarkable habitat for the Gila topminnow, federally-listed as endangered. The Cienega Creek system contains the largest population of the species in the United States and is one of only nine remaining natural populations in Arizona. Cienega Creek is one of the last places in Arizona uncontaminated by exotic or non-native fish and provides habitat for two other native fish species; the Gila chub, a

candidate for federal listing and the longfin dace, a common and widely distributed species.

Under the no action alternative the Bureau and cooperating agencies would take action to prevent exotic fish species from colonizing Cienega Creek, or to take measures to eliminate exotics should they be introduced into the system. This action would protect the outstandingly remarkable value.

Under the no action alternative efforts to restore the natural riparian system are planned. When these plans are developed and implemented the outstandingly remarkable fish habitat values would benefit. These efforts to improve the fish habitat would positively benefit Gila topminnow and other native fish species. Riparian pastures are being developed in the Spring-use areas. Crop farming is not authorized. These management actions would protect the outstandingly remarkable fish habitat value.

• Conclusion

Under the no action alternative the outstandingly remarkable fish and wildlife habitat values would not receive special legislative protection.

However, implementation of the management actions associated with the no action alternative would have no adverse impacts on fish and wildlife habitat values.

Impacts on Recreation Opportunities

Recreational activities that occur in the study area include wildlife observation, picnicking, photography, horseback riding, hiking, hunting, and camping.

Scenic quality varies considerably along the length of Cienega Creek. River landscape features include riffles and swift runs, tall cutbanks, deep clear pools, steep and rocky narrows with small waterfalls, and a narrow but diverse riparian gallery. A one-mile segment of

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

Empire Gulch located near the historic Empire Ranch headquarters consists of a visually spectacular Fremont Cottonwood gallery. This portion of Empire Gulch is a popular orientation, sightseeing, and picnicking stop for visitors to the Bureau of Land Management's Empire Ranch.

Ongoing management actions would protect recreation opportunities. For example, the road near the upstream end of the agricultural area may be altered from a culvert-type crossing to a low water crossing. There are preliminary plans to reroute the road to reduce creek crossings. Hazardous roads would be closed.

- **Conclusion**

Implementation of the no action alternative would not have adverse impacts on recreation.

Impacts on Riparian Vegetation

The riparian vegetation along the creek is within the Cottonwood-Willow series of the Southwestern Riparian Deciduous Woodland Biotic Community. The dominant species are Fremont cottonwood and Goodding willow. Velvet ash, and Arizona walnut occur sporadically along the entire stretch of the creek, but are more common along the northern end in the deeper, rocky canyon bottoms.

Some marsh (cienega) habitat is evident along Cienega Creek, Empire Gulch, and Mattie Canyon. These areas support cattail, rushes and reeds, sedges, water parsnip, pondweeds and various other wetland plants.

Under the no action alternative the ongoing management actions would protect riparian vegetation. For example, riparian pastures are being developed in the spring-use grazing areas. Crop farming is not authorized. Preliminary planning is underway to restore the natural riparian systems in the area. For prevention of erosion, measures would be developed to prevent headcutting of washes. This would stabilize soils and improve water quality in Cienega Creek. All structures within Cienega Creek would be evaluated for potential removal to improve available fish habitat. In addition, two dirt water-diversion structures in Cienega Creek that have caused a 1.4 mile stretch of the creek to dry up would be removed, increasing the amount of available fish habitat.

- **Conclusion**

Implementation of the management actions associated with the no action alternative would have no adverse impacts on riparian vegetation.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Cienega Creek Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan Amendment (1993) that Cienega Creek was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Tucson Resource Area Office, Tucson, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Cienega Creek wild and scenic study area were held in Tucson April 13 and Sonoita April 23, 1993. Thirty-five to 40 people attended the Tucson meeting and 10 attended the Sonoita meeting.

Five interagency public informational meetings

for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and

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informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shivwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermillion Resource Area.

B. Smith, Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Resource Advisor. K. Pearson acted as project manager.

CIENEGA CREEK WILD AND SCENIC RIVER STUDY AREA

REFERENCES

Arizona Rivers Coalition

- 1991 Arizona Rivers - Lifeblood of the Desert (A Citizens Proposal for the Protection of Rivers In Arizona), Phoenix, Arizona

Public Laws

- 1976 P.L. 94-579, Federal Land Policy and Management Act of 1976
- 1973 P.L. 100-478, Endangered Species Act of 1973, as amended
- 1969 P.L. 91-190, National Environmental Policy Act of 1969
- 1968 P.L. 90-542, Wild and Scenic Rivers Act of 1968

U.S. Bureau of Land Management

- 1993 Safford District Resource Management Plan Amendment, Safford, Arizona.
- 1993 Cienega Creek Wild and Scenic Suitability Determination Assessment, Tucson, Arizona.
- 1992 Potential Wild and Scenic Rivers, Phoenix, Arizona.

Internal Materials

Memorandum from State Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services State Office, to State Director, BLM Arizona, dated Jan. 4, 1994. Section 7 Consultation/species list.

**FRANCIS CREEK
WILD AND SCENIC RIVER STUDY AREA**

**KINGMAN RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

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FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Francis Creek were identified in the Kingman Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Francis Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Francis Creek Wild and Scenic River Study Area is in Mohave and Yavapai Counties, Arizona. The study corridor extends upstream from the Burro Creek confluence, which is 12 miles northwest of the town of Bagdad.

The Francis Creek Wild and Scenic Study area corridor is 11.4 riparian miles long and approximately 3,640 acres, of which 1,360 acres (37 percent) are public lands managed by the Bureau of Land Management (Map FC-1). The study area is in the Kingman Resource Area of the Phoenix District.

The creek traverses primarily public and private land and passes through state land closer to its junction with Burro Creek. The confluence of the two streams is located on state land.

The Francis Creek study area ranges in elevation from 3,200 to 4,400 feet. The geologic setting is primarily older granitic rock overlain by Quaternary volcanic deposits of basalt. The creek flows through mesa-canyon country within the Central Mountains Physiographic Province.

Much of its course is confined within a narrow canyon. Chaparral is the dominant vegetation in this zone. Francis Creek drains the Aquarius and Mohon mountain ranges and provides a significant source of perennial flow into Burro Creek, a major tributary of the Big Sandy River. Livestock grazing is a major land use in this region.

Francis Creek was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the Kingman Resource Management Plan. The creek is free-flowing and has outstandingly remarkable scenic and fish and wildlife habitat values. The Resource Management Plan tentatively classifies Francis Creek as Recreational. The Bureau of Land Management conducted a suitability determination during 1993.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE FC-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY.**

FRANCIS CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	4.2	1.8	5.4	11.4
PERCENT	36.8	15.8	47.4	100.0
TOTAL ACRES	1,360	560	1,720	3,640
PERCENT	37.3	15.4	47.3	100.0

C. INTERRELATIONSHIPS

1. The Bureau of Land Management

Francis Creek flows for approximately 1.5 miles along the northern boundary of the Upper Burro Creek Wilderness Area. The wilderness area encompasses significant scenic, riparian, and fish and wildlife values. Although remote from urban areas, it is widely recognized throughout Arizona as a premier wilderness by virtue of its panoramic landforms, pristine character, and abundant raptors and other wildlife. A draft

Wilderness Management Plan is scheduled for completion in 1996.

Approximately 480 acres of the study area along lower Francis Creek are in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, designated in the Kingman Resource Management Plan. This area of critical environmental concern was established to protect and enhance riparian habitat, threatened and endangered species, and cultural resources through ecosystem management.

**TABLE FC-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

FRANCIS CREEK STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Upper Burro Creek Wilderness Area	480	13.2
Burro Creek Riparian and Cultural Area of Critical Environmental Concern	480	13.2

2. Department of the Interior

The Bureau of Land Management is a partner in the Bald Eagle Nest Watch program administered by the U.S. Fish and Wildlife Service.

The U.S. Geological Survey operates and

maintains a gaging station on the lower portion of Francis Creek 13.1 miles northwest of Bagdad.

3. State of Arizona

There are 560 acres of state lands in the Francis Creek study area. The Arizona State Land

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

Department manages much of the upper Francis Creek watershed in the Mohon Mountains.

The State of Arizona has designated Francis Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18: Chapter 11, 1992). The general criteria for designation of unique waters are good water quality and either exceptional recreational or ecological significance, or the provision of critical habitat for threatened or endangered species. The state sets water quality standards for unique waters.

4. Local Governments

The Francis Creek study area is in portions of Mohave and Yavapai Counties.

5. Private

Cattle ranches occupy much of the private land along the creek. Francis Creek is the major source of water for Bagdad. A pumping station and pipeline are located along its lower course, and a road runs adjacent to the lower two miles of the creek.

D. SCOPING

Scoping meetings specifically highlighting the Francis Creek Wild and Scenic Study Area were held in Bagdad April 5, 1993 and Phoenix on April 14. Ninety-five to 100 people attended the Bagdad meeting and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on water rights

- Impacts on private property rights and uses
- Impacts on federally-listed or candidate fish and wildlife species
- Impacts on riparian vegetation
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable fish and wildlife habitat values
- Impacts on mineral development
- Impacts on the economic stability of Bagdad

Issues Considered but Not Addressed

- Impacts on water rights

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further.

- Impacts on private property rights and uses

Current uses of Francis Creek and adjoining lands would continue. The Bureau of Land

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

Management has no authority to regulate or zone private lands, nor would it seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impacts on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- Impacts on federally-listed or candidate fish and wildlife species

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued

existence of any federally-listed species. Impacts on federally-listed or candidate species will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

- Impacts on riparian vegetation

Impacts on riparian vegetation will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Francis Creek study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned management under existing plans.

The following alternatives are addressed:

Recommended alternative
All suitable

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines that the 3,640 acre Francis Creek study area is not suitable for inclusion in the National Wild and Scenic Rivers System.

Implementation of the recommended alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

The study area incorporates 480 acres in the Upper Burro Creek Wilderness Area and an additional 480 acres in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. The remaining 400 acres of public land are not included in either the Wilderness

Area or the Area of Critical Environmental Concern.

Under the recommended alternative, the portion of the study area in the wilderness area would be managed in accordance with the provisions of the Wilderness Act. Management of 480 acres would conform to the management objectives established in the Kingman Resource Management Plan for the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. The remainder would not be covered by special management protection.

If the recommended alternative is selected and implemented, current resource management would continue. The following summarizes selected management actions.

Wild and Scenic River management actions

The recommended alternative determines that the entire Francis Creek study area is not suitable for designation. No wild and scenic river management actions would occur.

Ongoing management actions

Ongoing management actions are those currently in effect which would continue regardless of the action of Congress to designate Francis Creek as a wild and scenic river. These actions are part of the implementation of the Upper Burro Creek Wilderness Area, the Kingman Resource Area Management Plan, and the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

- The 480 acres of the study area in the Upper Burro Creek Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights. Approved plans of operations would be required for all mining related activities in the wilderness, above the

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

level of casual use as defined at 43 CFR 3809.0-5(b).

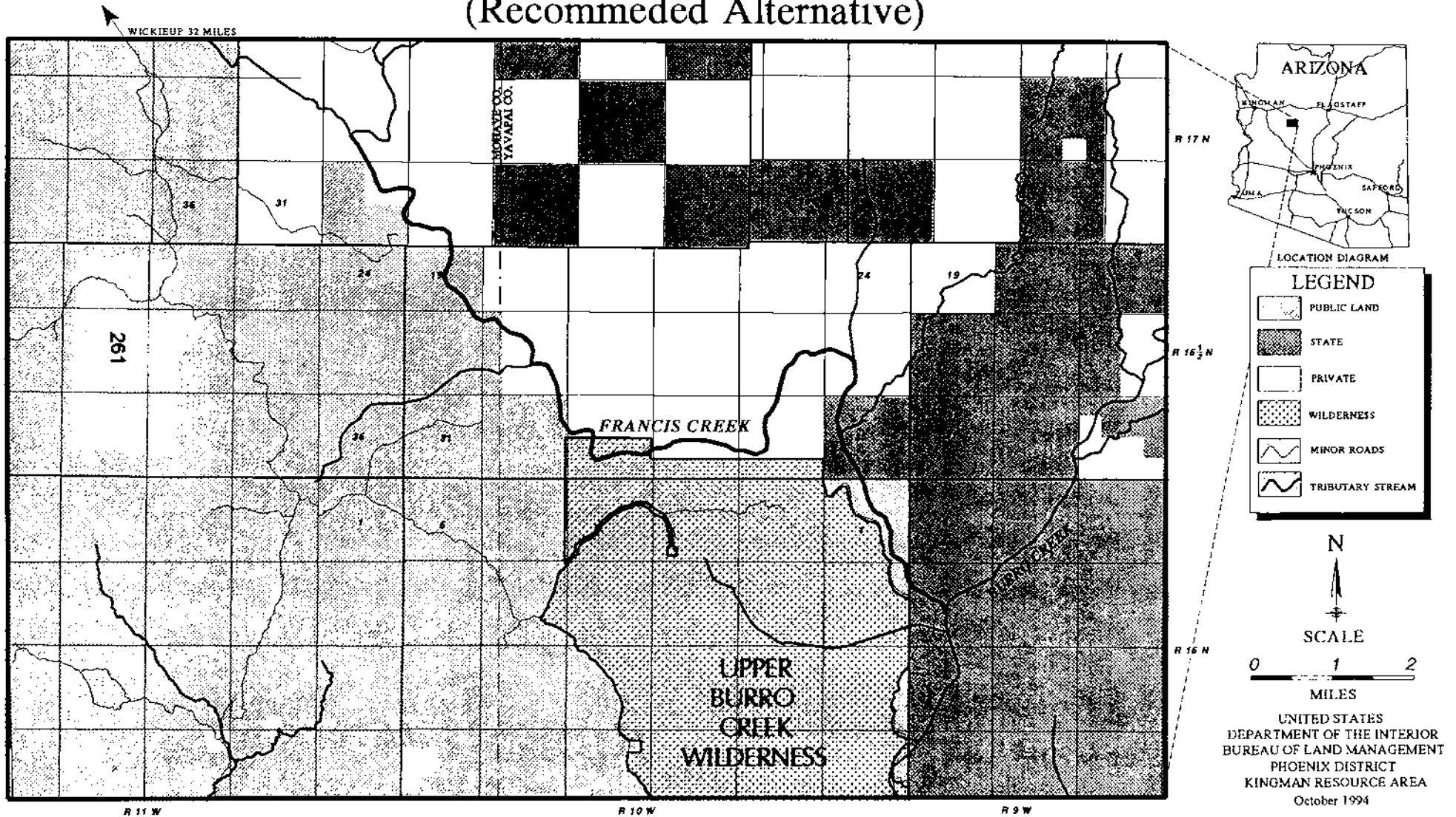
- Motorized travel is prohibited on 480 acres in the Upper Burro Creek Wilderness Area in accordance with the Wilderness Act, subject to valid existing rights.
- Formal notification of the federal reserved water right established at the time of designation of the Upper Burro Creek Wilderness Area would be made to the Arizona Department of Water Resources. The Bureau of Land Management would perfect its existing state instream flow application.
- 480 acres in the Burro Creek Area of Critical Environmental Concern would be recommended for withdrawal from new mineral entry, subject to valid existing rights. Approved plans of operations would be required for all mining related activities on more than five acres of public land.
- Within the Area of Critical Environmental Concern, mineral material disposals of saleable sand, gravel, and related deposits would be prohibited, and no surface occupancy stipulations would be required for leasable mineral development.
- The 400 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Approved plans of operations would be required for locatable minerals operations that exceed the level of casual use.
- New major utility corridors would be prohibited in accordance with the Kingman Resource Management Plan. New major rights-of-way would be confined to existing corridors.
- Maintenance and redesign of existing transmission facilities would be allowed pending approval in compliance with the National Environmental Policy Act and in accordance

with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

- New road development would be prohibited in 1/2 mile of any bald eagle nest.
- Off-highway vehicle use would be limited to designated roads and trails on 480 acres in accordance with management prescriptions for the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.
- Off-highway vehicle use would be limited to existing roads and trails on 400 acres outside the wilderness and the area of critical environmental concern.
- Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/2-mile of any bald eagle nest during breeding season from January 1 to June 1.
- Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
- The development of campgrounds would be restricted to areas outside the riparian zone and the 100-year flood plain.
- Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
- The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
- An all-aged stand of key native trees, shrubs, and grasses would be promoted.
- Removal of native plants would be prohibited.
- The Riparian Area Condition Evaluation inventory would continue.

FRANCIS CREEK

(Recommended Alternative)



FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

- Efforts would be made to acquire up to 400 acres of state and private land on a willing seller-willing buyer basis or by exchange.
- Instream flow would be monitored to establish the minimum flow necessary to protect fish and wildlife habitat.
- Water quality would be regularly monitored to determine compliance with state standards established for streams designated as unique waters.
- Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing enclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
- Desired plant community descriptions would be developed and incorporated into allotment management plans.
- The Burro Creek Allotment Management Plan would be revised as necessary to conform to provisions in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by a proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- In accordance with the Kingman Resource

Management Plan, selected areas along Francis Creek would be inventoried for the presence of archaeological or historic sites.

- Protection measures, such as fencing or periodic patrolling, would be developed for specific sites that have either a high level of significance or a history of vandalism.

C. ALL SUITABLE ALTERNATIVE

The All Suitable Alternative determines that the entire 11.4 mile length of Francis Creek in the study area is suitable for designation as Recreational. Management actions would conform to the provisions of the Wild and Scenic Rivers Act, the Kingman Resource Management Plan, and management of the Upper Burro Creek Wilderness Area and the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. The following summarizes selected management actions.

Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur as a result of the designation of Francis Creek as Recreational. If the actions would overlap ongoing management actions, the more stringent action would apply.

- New mining claims and mineral leases would be allowed. Approved plans of operations would be required for all mining related activities above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 1,360 acres.
- New hydroelectric power facilities, dams, major diversions and levees would be prohibited on 4.2 miles of Francis Creek. Maintenance of existing facilities would be permitted.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

- New transmission lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- New roads or trails would be allowed.
- Motorized travel would be permitted if there was no impairment of outstandingly remarkable values.
- Moderate-sized campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged, but public use and access may be regulated to protect and enhance outstandingly remarkable values.
- Woodcutting would be allowed.
- Water quality would be maintained or improved.
- Instream flow would be quantified. An assessment would be completed in order to secure instream flows to protect outstandingly remarkable values.
- Livestock grazing use would be permitted, consistent with current practices.

Ongoing management actions

Ongoing management actions in the Francis Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Upper Burro Creek Wilderness Area, the Kingman Resource Area Management Plan, and the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

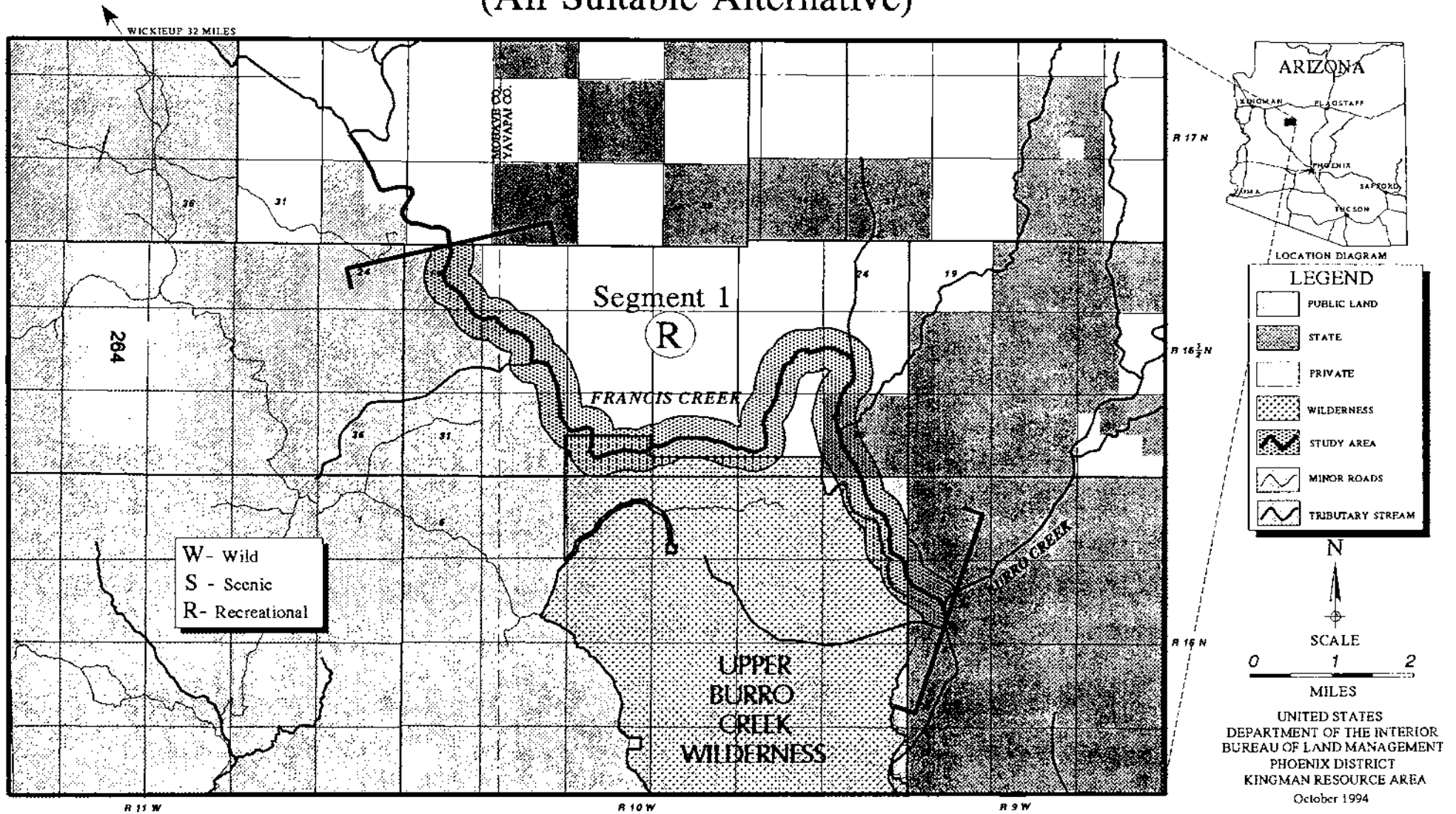
- The 480 acres of the study area in the Upper Burro Creek Wilderness Area are withdrawn

from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights. Approved plans of operations would be required for all mining related activities in the wilderness, above the level of casual use as defined at 43 CFR 3809.0-5(b).

- Motorized travel is prohibited on 480 acres in the Upper Burro Creek Wilderness Area in accordance with the Wilderness Act, subject to valid existing rights.
- Formal notification of the federal reserved water right established at the time of designation of the Upper Burro Creek Wilderness Area would be made to the Arizona Department of Water Resources. The Bureau of Land Management would perfect its existing state instream flow application.
- 480 acres in the Burro Creek Area of Critical Environmental Concern would be recommended for withdrawal from new mineral entry, subject to valid existing rights. Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).
- Within the area of critical environmental concern, mineral material disposals of saleable sand, gravel, and related deposits would be prohibited, and no surface occupancy stipulations would be required for leaseable mineral development.
- The 400 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Approved plans of operations would be required for locatable minerals operations that exceed the level of casual use.

FRANCIS CREEK

(All Suitable Alternative)



FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

- New major utility corridors would be prohibited in accordance with the Kingman Resource Management Plan. New major rights-of-way would be confined to existing corridors.
 - Maintenance and redesign of existing transmission facilities would be allowed pending approval in compliance with the National Environmental Policy Act and in accordance with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.
 - New road development would be prohibited within 1/2 mile of any bald eagle nest.
 - Off-highway vehicle use would be limited to designated roads and trails on 480 acres in accordance with management prescriptions for the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

Off-highway vehicle use would be limited to existing roads and trails on 400 acres outside the wilderness and the area of critical environmental concern.
 - Intensive recreational activities, such as camping and picnicking, would be prohibited within 1/2-mile of any bald eagle nest during breeding season from January 1 to June 1.
 - Helicopter flights would be prohibited within 1/2 mile of active bald eagle nests during the breeding season.
 - The development of campgrounds would be restricted to areas outside the riparian zone and the 100-year flood plain.
 - Habitat conditions for wildlife, native fish, and threatened and endangered species would be assessed and monitored on a regular basis.
 - The Bureau of Land Management would continue to assist the Bald Eagle Nest Watch Program.
 - An all-aged stand of key native trees, shrubs, and grasses would be promoted.
 - Removal of native plants would be prohibited.
 - The Riparian Area Condition Evaluation inventory would continue.
 - Efforts would be made to acquire up to 400 acres of state and private land on a willing seller-willing buyer basis or by exchange.
 - Instream flow would be monitored to establish the minimum flow necessary to protect fish and wildlife habitat.
 - Water quality would be regularly monitored to determine compliance with state standards established for streams designated as unique waters.
 - Livestock grazing would be managed to protect aquatic, riparian, and wildlife resources by constructing enclosure fences, developing alternate water sources, or requiring seasonal restrictions or other rotation schedules.
 - Desired plant community descriptions would be developed and incorporated into allotment management plans.
 - The Burro Creek Allotment Management Plan would be revised as necessary to conform to provisions in the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.
- The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.
- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
 - Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by a proposed activity if possible.
 - If avoidance is not possible, impacts would

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.

- In accordance with the Kingman Resource Management Plan, selected areas along Francis Creek would be inventoried for the presence of archaeological or historic sites.
- Protection measures, such as fencing or periodic patrolling, would be developed for specific sites that have either a high level of significance or a history of vandalism.

D. ALTERNATIVES CONSIDERED BUT REJECTED

One alternative considered was a part suitable alternative based on land ownership, where the designated portions of Francis Creek would include only federal land. This alternative was rejected because public land is located only on one side of the creek for most of its length in the study area. Therefore, this alternative would not provide adequate protection for the outstandingly remarkable values.

The Arizona Rivers Coalition (1991) proposed that seven miles of Francis Creek be recommended for a Scenic designation. This was considered by the Bureau of Land Management but rejected because information available during the eligibility study did not support a Scenic classification.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE FC-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative (no action)	All suitable
Outstandingly Remarkable Scenic Values	No adverse impact on 960 acres; 400 acres without administrative or legislative protection	No adverse impact; Beneficial impact from long-term legislative protection
Outstandingly Remarkable Fish and Wildlife Habitat Values	No adverse impact on 960 acres; 400 acres without administrative or legislative protection	No adverse impact; Beneficial impact from long-term legislative protection
Mineral Development	No adverse impact	No adverse impact
Economic Stability of Bagdad	No adverse impact	Potential minor adverse impact from restrictions on new utility lines

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Francis Creek study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Kingman Resource Management Plan, the Upper Sonoran Wilderness Environmental Impact Statement, and the Burro and Francis Creeks Potential Wild and Scenic Suitability Assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

Francis Creek is distinguished by outstandingly remarkable scenic values and fish and wildlife habitat values.

Its outstanding scenic qualities include cliffs within a narrow canyon, rugged landforms, a perennial flow, riparian vegetation, and undeveloped shorelines through much of its course.

Francis Creek supports a diversity of raptor and other wildlife species and a predominantly native fishery, a rare occurrence in Arizona's desert streams. At least eight federally-listed and candidate species are known to exist in the study area.

B. MINERALS

Areas adjacent to Francis Creek have been classified as having low mineral potential (Upper Sonoran Final Wilderness Environmental Statement 1987 and U.S. Bureau of Mines 1982). No commercial operations are present in the vicinity of the study area and no substantial future mineral development is projected.

Approximately 15 miles to the southeast, the area surrounding Bagdad is classified as having high mineral potential and has produced copper, molybdenum, manganese, gold, and

silver. The Cyprus Bagdad Mine is one of Arizona's major copper producers.

C. LANDS

No major highways exist in the vicinity of Francis Creek. The area contains a road crossing the creek in at least two locations. Several other dirt roads access the creek at various locations in the area.

Although no major utility corridors exist in the area, a right-of-way exists for transmission facilities serving the town of Bagdad. A 12-inch water pipeline and a 2-inch gas pipeline parallel the Upper Burro Creek Wilderness to a water pump station midway up the creek in the study area. The water pumped from Francis Creek provides 85 percent of Bagdad's domestic water supply. The pump is fueled by natural gas, however, it is scheduled to be replaced soon with an electric-powered pump. Electricity would be brought to the site by a single-pole two-wire utility line.

D. RECREATION

Francis Creek is remote from major highways and communities, and access is difficult. As a result, visitor use days are low with a total estimated to be less than 1,000 days annually.

The recreational opportunities include camping, hiking, backpacking, rock collecting, hunting, and viewing wildlife. No recreational developments exist and none are planned.

E. FISH AND WILDLIFE HABITAT

The riparian habitat in the Francis Creek study area supports over 200 fish and wildlife species, including a prolific native fish population and an abundance of raptors and other birds. There are eight federally-listed or candidate species.

Birds of prey include bald eagles (Haliaeetus leucocephalus), a federally listed endangered

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

species that winters along Francis and Burro creeks. Other raptors present are Mexican black-hawks (Buteo anthracinus anthracinus), zone-tailed hawks (Buteo albonotatus), and ferruginous hawks (Buteo regalis), a Candidate Category II species.

Candidate Category II reptile and mammal species observed near Francis Creek are Sonoran desert tortoises (Gopherus agassizi) and California leaf nose bats (Myotis lucifugus).

Candidate Category II amphibian species along Francis Creek include Arizona Southwest toads (Bufo microscapho microscaphus) and Yavapai leopard frogs (Rana yavapalensis).

The five native fish species include Colorado River round-tailed chub (Gila robusta robusta) and Sonora suckers (Catostomus insignis), both Candidate Category II species. Other native fish species in Francis Creek are longfin dace (Agosia chrysoqaster), speckled dace (Rhinichthys osculus), and mountain suckers (Pantosteus clarki). Introduced exotic fish species are absent.

According to the U.S. Fish and Wildlife Service, seven additional proposed or candidate species may be present along Francis Creek. These include southwestern willow flycatchers (Empidonax traillii extimus), proposed for listing as endangered. Candidate Category II species potentially present in the area include spotted bats (Euderma maculatum), loggerhead shrikes (Lanius ludovicianus), chuckwalla (Sauromalus obesus), Rosy boas (Lichanura trivirgata), Yavapai Arizona pocket mice (Perognathus amplus amplus), and Hualapai southern pocket gophers (Thomomys umbrinus).

F. VEGETATION

Chaparral, pinyon-juniper, and grassland communities exist on the mesas and upland areas bordering Francis Creek. Common plants in these communities include shrub live oak (Quercus turbinella), juniper (Juniperus monosperma), pinyon pine (Pinus edulis), and

various grasses.

Dominant trees in the riparian deciduous community along the creek include cottonwood (Populus fremontii), willow (Salix goodingii), sycamore (Plantanus wrightii), ash (Fraxinus velutina), alder (Alnus tenuifolia), and netleaf hackberry (Celtus reticulata).

Special status plants in the Francis Creek study area include a cactus species, Mammillaria viridiflora (B and R) Bodeker, listed as a sensitive species by the Arizona Commission of Agriculture and Horticulture and the Arizona Natural Heritage Program. Arizona cliffrose (Purshia subintegra), federally listed as endangered, may be present.

G. CULTURAL RESOURCES

No archaeological surveys have been conducted along Francis Creek and the location and condition of cultural resources is currently unknown. Evidence from the surrounding area indicates that the abundant water, edible plant, and game resources along Francis and Burro Creek attracted prehistoric occupants. Masonry pueblo sites exist along upper Burro Creek and are reported to exist in the uplands along Francis Creek. Occupied sometime between A.D. 900 and 1200, they represent the westernmost manifestation of the prehistoric Prescott Culture. Other types of archaeological sites in the vicinity of Francis Creek include caves and rockshelters, artifact scatters, and petroglyph sites that have scientific value.

H. WATER RESOURCES

A federal reserved water right was created for the portion of Francis Creek in the Upper Burro Creek Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right is ongoing and notification would be submitted to the State of Arizona.

The Bureau of Land Management submitted an application for instream flow with the State of Arizona in 1984 (No. 33-89119) on Francis and

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

Burro Creeks for wildlife, fisheries and recreational purposes. This application is being amended to include two separate assessments, one for the Francis Creek portion and one for the public land reaches on Burro Creek.

The State of Arizona has designated Francis Creek as a Unique Water (Arizona Department of Environmental Quality, Title 18: Chapter 11, 1992). Streams are designated as unique waters on the basis of good water quality and at least one of the following criteria: exceptional recreational or ecological significance, or the provision of critical habitat for threatened or endangered species. Except for exceptional recreational significance, all of the criteria apply to Francis Creek. The state sets water quality standards for unique waters. Francis Creek has excellent water quality and provides the major source of water for the community of Bagdad.

Water quality and quantity monitoring sites have been established along Francis Creek to measure quality and provide baseline data in support of an instream flow assessment.

The U.S. Geological Survey operates and maintains a gaging station on the lower portion of Francis Creek 13.1 miles northwest of Bagdad. The average flow is reported as 16.1 cubic feet per second. The maximum flow, recorded during a flash flood on August 25, 1988, was 6,830 cubic feet per second, and a minimum flow of 0.3 cubic feet per second was recorded August 1, 1990 (U.S. Geological Survey 1992).

There are several water rights and existing wells in the study area. Most notable is the pumping station at Francis Creek where the town of Bagdad draws most of its domestic water supply. Other wells are used to supply water for livestock.

I. LIVESTOCK GRAZING

Francis Creek is bordered by the Burro Creek and Francis Creek grazing allotments, which incorporate 84,300 acres of land administered by the Bureau of Land Management. The total preferred capacity of these areas is 10,630 animal unit months. An animal unit month is defined by the amount of forage required to sustain one cow for one month.

Both allotments contain a mix of perennial and ephemeral forage, and both are being managed to improve currently unsatisfactory range conditions.

The Kingman Resource Area has implemented an allotment management plan for the Burro Creek Allotment, approved in September 1983.

J. LOCAL POPULATION AND ECONOMY

This section considers three components of the social framework: population, income and employment, and pertinent social perceptions. For the purposes of this study, data have been aggregated into an environmental study area. The environmental study area for Francis Creek is defined by a circular area 100 miles in diameter centered generally on the segments of Francis Creek that cross the Bureau of Land Management managed land. The environmental study area covers portions of La Paz, Mohave and Yavapai Counties in Arizona.

Population

In 1990, about 70,000 people lived in the Francis Creek environmental study area. Prescott, in Yavapai County, and Lake Havasu City, in Mohave County, are the major population centers. There was an estimated 40 percent increase in population for the environmental study area between 1980 and 1990.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE FC-4
POPULATION: SELECTED CITIES**

County/Municipality	1980	1990	PCT CHG
LA PAZ	(1)	13,384	
Bouse*	618	515	-16.7
Parker	2,542	2,897	14.0
Salome/Wenden*	709	1,457	105.5
MOHAVE	55,865	93,497	67.4
Lake Havasu City	15,909	24,363	53.1
YAVAPAI COUNTY	68,145	107,714	58.1
Bagdad*	2,349	1,858	-20.9
Prescott	19,865	26,455	33.2
Wickenburg	3,535	4,515	27.7

(1) La Paz County was created in 1983

Source: Arizona: Census Bureau

* Arizona Community Profiles

Population Projections

**TABLE FC-5
POPULATION PROJECTIONS: SELECTED CITIES**

Places	1995	2000	2010	2020
ARIZONA	4,134,900	4,632,900	5,653,000	6,812,000
LA PAZ COUNTY	15,522	16,684	19,123	21,697
Parker	3,051	3,279	3,758	4,264
MOHAVE COUNTY	116,523	134,603	171,276	208,477
Lake Havasu City	33,297	38,404	48,944	59,574
YAVAPAI COUNTY	123,894	141,123	180,795	222,680
Bagdad	1,860	1,860	1,865	1,870
Prescott	29,448	32,636	39,975	47,724

Source: Arizona Projections for 1993-2040 by Place, Arizona Department of Economic Security, Research Administration, Population Statistics Unit, May, 1993

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

Income and Employment

There is a wide variation in the per capita income of the residents of the Francis Creek Environmental study area (Table FC-6). For

example, the data show per capita income figures for Lake Havasu City are significantly higher than comparable figures for Prescott or Parker.

**TABLE FC-6
PER CAPITA INCOME: SELECTED CITIES**

Area Name	1987	1979	PCT CHG
ARIZONA	11,521	7,042	63.6
LA PAZ COUNTY	8,263	5,063	63.2
Parker	10,353	6,133	68.8
Lake Havasu City	12,228	7,717	65.6
YAVAPAI COUNTY	9,838	6,450	52.5
Bagdad	Not Available	Not Available	
Prescott	10,676	7,143	49.5

Source: Population Estimates (1988) and Per Capita Income (1987) for Counties, Incorporated Places and Selected Towns and Townships: Arizona, U.S. Census, February 1, 1990.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

Nonagricultural employment is the primary source of income throughout the area. Table FC-7 displays data indicating that the trade, services,

and government sectors are major employers in each of the counties in the Francis Creek environmental study area.

**TABLE FC-7
LABOR AND EMPLOYMENT: COUNTIES**

	LaPaz	PCT	Mohave	PCT	Yavapai	PCT	Maricopa	PCT
CIVILIAN LABOR FORCE*	5,825		33,150		41,075		108,830	
Total Unemployment	425		2,800		2,200		7,280	
Rate	7.3		7.3		5.4		6.8	
Rate(Seas.Adj.)	7.4		7.4		5.4		7.4	
Total Employment	5,400		36,350		38,875		99,540	
TOTAL WAGE AND SALARY	4,125		27,750		41,075		101,620	
Manufacturing	250	66.0	2,800	10.0	2,250	5.5	11,600	1.1
Mining and Quarrying	75	1.8	50	0	950	2.3	700	
Construction	225	5.4	3,275	8.2	2,650	6.5	62,100	5.1
T.C.P.U.	150	3.6	1,275	4.6	1,075	2.6	56,400	5.5
Trade	1,300	31.5	8,550	28.6	7,950	19.3	263,100	25.9
F.I.R.E.	100	2.4	1,275	3.6	975	2.4	75,500	7.4
Services and Misc.	1000	24.2	8,200	28.8	750	18.1	291,000	28.7
Government	925	22.4	4,500	16.2	6,125	14.9	145,600	14.3

* Adjusted to the Current Population Survey (CPS) to reflect place of residence.

T.C.P.U. - Transportation, Communications, and Public Utilities

F.I.R.E. - Finance, Insurance, and Real Estate

Source: Nonmetropolitan Counties Labor Force and Employment: December 1990, Arizona Labor Market Information Newsletter, 15 (2), 10 February 1991.

Social Perceptions

This section identifies and discusses those types of perceptions that relate to social issues and concerns pertaining to the Francis Creek environmental study area. For example, employment data on the trade sector indicates that retail sales is a major factor in the economy of the area. Over 20 percent of the jobs in the area are in this sector, which includes the wholesale and retail trade industries. Services,

including lodging and restaurant establishments, also provide a major source of employment in the counties within the environmental study area.

Residents of the town of Bagdad, in Yavapai County, have voiced strong opposition to any recommendation for including the Francis Creek segments in the National Wild and Scenic Rivers System. They maintain protection is not needed because the river is not threatened, and

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contend that wild and scenic river management would unnecessarily duplicate federal activities now in place with the area of critical environmental concern designation.

Residents throughout Mohave and La Paz Counties tend to be skeptical about the Bureau of Land Management and other government agency activities, and harbor suspicion that each new federal government program threatens their rights. They feel the restrictions inherent in this type of classification would inhibit or prevent future developments.

Profile Community

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment. Bagdad was officially named on January 1, 1882. The post office was established in 1944.

Bagdad's major economic activities are mining and education. In 1990 there were 736 people in the Bagdad civilian labor force with a 0.4 percent unemployment rate. Cyprus Bagdad Copper Mine employs over 600 people while Bagdad School District has about 80 employees.

The community has a small shopping center with a grocery store, beauty shop, retail shops and small professional offices.

The Cyprus Bagdad operation consists of an open pit copper-molybdenum mine, a 75,000 ton per day concentrator, a dump leach operation, and an solvent extraction-electrowinning plant. Mining is conducted by electric shovels using truck haulage to the primary crusher and dumps.

The Cyprus Bagdad operation makes use of water rights on the Big Sandy River, and Francis Creek and is dependent on utility corridors (electric, water, and natural gas) that cross Burro Creek, and Big Sandy River.

GSA Resources operates the Burro Creek Clay Mine, an open pit saponite clay mine eight miles southwest of Bagdad along Burro Creek.

Scenic attractions include the Prescott National forest about 20 miles away.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Francis Creek study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

9. Management plans would be developed for any Congressionally designated Wild and Scenic River.

10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate-sized mine.

Large mining operations would be those involving more than five acres and subject to approval of a Bureau of Land Management approved plans of operations. Any restrictions on mineral development would be subject to valid existing rights.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The Francis Creek study area contains outstandingly remarkable scenic, and fish and wildlife habitat values.

Under the recommended alternative, the Francis Creek study area would be determined not suitable for designation and its outstandingly remarkable values would not receive special

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legislative protection under the Wild and Scenic Rivers Act.

Areas adjacent to Francis Creek have been classified as having low mineral potential (Upper Sonoran Final Wilderness Environmental Statement 1987 and U.S. Bureau of Mines 1982). No commercial operations are present in the vicinity of the study area, and no substantial future mineral development is projected.

The projected minerals scenario assumes the development of one small mine in the next 20 years covering an estimated four acres. This mine would employ four to six people and have up to three miles of access roads on public land.

On approximately 960 of the 1,360 acres of public land, the outstandingly remarkable scenic, and fish and wildlife habitat values would be subject to the effects of actions allowable under the management of the Upper Burro Creek Wilderness Area and the Burro Creek Riparian and Cultural Area of Critical Environmental Concern.

In the remaining 400 acres of public land in the Francis Creek study area, the outstandingly remarkable scenic, and fish and wildlife habitat values would not receive special protection.

Impacts on outstandingly remarkable scenic values.

The outstanding scenic qualities include cliffs within a narrow canyon, rugged landforms, a perennial flow, riparian vegetation, and undeveloped shorelines through much of its course.

The long-term legislative protection for the outstandingly remarkable scenic values provided by the Wild and Scenic Rivers Act would not be available under the recommended alternative.

Protection for the outstandingly remarkable scenic values would be provided by the

ongoing management activities described in Chapter II. For example, the prohibition on new major utility corridors would protect scenic values by preserving the natural character of the landscape. Acquiring up to 400 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable scenic values on the acquired lands.

The 480 acres of the outstandingly remarkable scenic values under the administrative protection of the Burro Creek Riparian and Cultural Area of Critical Environmental Concern would be slightly more vulnerable to impacts because the prescriptions on potentially conflicting activities, such as new road construction and motorized travel, are not as strong as the management prescriptions that would result from designation as a wild and scenic river.

The additional 400 acres of outstandingly remarkable scenic values would have no special protection and would be more vulnerable to disturbance from recreation, mining, and other activities. However, projected levels of mineral development and recreational use are low and not expected to pose serious threats to outstandingly remarkable scenic values.

• Conclusion

There would be little likelihood of adverse impacts to the outstandingly remarkable scenic values on 960 acres of public land in the Upper Burro Creek Wilderness Area and the Burro Creek Riparian and Cultural Area of Critical Environmental Concern from implementation of the recommended alternative.

The outstandingly remarkable scenic values on the 400 acres outside the wilderness area and area of critical environmental concern would not have any special protection.

The outstandingly remarkable scenic values in the Francis Creek study area would not receive

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long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable fish and wildlife habitat values.

The riparian habitat in the Francis Creek study area supports over 200 fish and wildlife species, including a native fish population and an abundance of raptors and other birds. There are at least eight federally-listed or candidate species and possibly one federally-listed plant species.

Under the recommended alternative, the outstandingly remarkable fish and wildlife habitat values would not receive long-term legislative protection from the Wild and Scenic Rivers Act.

Protection for the outstandingly remarkable fish and wildlife habitat values would be provided by ongoing management activities described in Chapter II. For example, the prohibition on new major utility corridors would protect habitat values by preserving the natural character of the landscape. Acquiring up to 400 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable values on the acquired lands. Prohibitions on roads, helicopter flights, and intensive recreational activities near bald eagle nests would protect wintering and breeding eagles from disturbance by human activities.

There would be little likelihood of adverse impacts to the outstandingly remarkable fish and wildlife habitat values on the 480 acres in the Upper Burro Creek Wilderness Area because of the legislative protection in that area. The 480 acres of outstandingly remarkable habitat values under the administrative protection of the Burro Creek Riparian and Cultural Area of Critical Environmental Concern would be slightly more vulnerable to impacts because the prescriptions on potentially conflicting activities, such as road construction and motorized travel, are not as

strong as those received under the Wild and Scenic Rivers Act.

The additional 400 acres of outstandingly remarkable fish and wildlife habitat values would have no special protection and would be more vulnerable to disturbance from recreation, mining, and other activities. However, projected levels of mineral development and recreational use are low and not expected to pose serious threats to the outstandingly remarkable values.

• Conclusion

There would be little likelihood of adverse impacts to the outstandingly remarkable fish and wildlife habitat values on 960 acres of public land in the Upper Burro Creek Wilderness Area and the Burro Creek Riparian and Cultural Area of Critical Environmental Concern from implementation of the recommended alternative.

The outstandingly remarkable fish and wildlife habitat values on the 400 acres outside the wilderness area and area of critical environmental concern would not have any special protection.

The outstanding remarkable fish and wildlife habitat values in the Francis Creek study area would not benefit from long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Mineral Development.

There are no known areas of high mineral potential in the immediate vicinity of Francis Creek. To its southeast, the area surrounding Bagdad is classified as having high mineral potential and has produced copper, molybdenum, manganese, gold, and silver. Due to its low mineral potential, future exploration and mining activities are expected to be very limited in the immediate vicinity of Francis Creek.

The projected minerals scenario assumes the

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development of one small mine in the next 20 years covering an estimated four acres. This mine would employ four to six people and have up to three miles of access roads on public land.

The 480 acres in the Upper Burro Creek Wilderness Area are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals. Another 480 acres are recommended for withdrawal from new mineral entry in accordance with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. In both of these areas, approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b).

In the area of critical environmental concern, mineral material disposals would be prohibited, and no surface occupancy stipulations required for mineral leases.

The 400 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Approved plans of operations would be required for locatable minerals operations that exceed five acres.

• Conclusion

There would be no adverse impacts on mineral development from implementation of the recommended alternative.

Impacts on the Economic Stability of Bagdad.

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment.

Bagdad's major economic activities are mining and education. In 1990, there were 736 people in the Bagdad civilian labor force, employed primarily by the Cyprus Bagdad Mine.

Francis Creek provides approximately 85 percent of Bagdad's community water requirements. The Cyprus Bagdad operation makes use of water rights on the Big Sandy River and Francis Creek. A 12-inch water pipeline and a 2-inch gas pipeline serving Bagdad parallel the lower portion of Francis Creek to a water pump station midway up the creek in the study area. The gas-powered water pump is scheduled to be replaced by an electric pump. Electricity would be brought to the site by a single-pole two-wire utility line.

Under the recommended alternative, maintenance and repair of the pump and utility lines within existing rights-of-way would be allowed.

There would be no special restrictions on new rights-of-way if needed.

• Conclusion

There would be no adverse impacts on the economic stability of Bagdad from implementation of the recommended alternative.

Cumulative impacts of implementing the recommended alternative.

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a corridor extending approximately five miles from the boundaries of the Francis Creek study area. Over most of the area, the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations

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and constraints associated with management plans for the Burro Creek Riparian and Cultural Area of Critical Environmental Concern, the Upper Burro Creek Wilderness Area, and the Kingman Resource Management Plan.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative, mineral entry would be allowed, and resource management activities would be subject to management plans for the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and the Upper Burro Creek Wilderness Area.

Areas of critical environmental concern are created by administrative decisions and subject to change; wilderness areas are created by legislative action and are subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from management plans for the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and the Upper Burro Creek Wilderness Area.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The Francis Creek study area contains outstandingly remarkable scenic, and fish and wildlife habitat values.

Under the All Suitable Alternative, the entire 11.4-mile Francis Creek Wild and Scenic River Study is determined to be suitable as Recreational and is recommended to Congress for inclusion in the National Wild and Scenic Rivers System. Its outstandingly remarkable scenic, and fish and wildlife habitat values would receive special legislative protection in addition to that provided by the Upper Burro Creek Wilderness Area.

Wild and Scenic River Act special protection would be provided to the 400 acres outside the Burro Creek Riparian and Cultural Area of Critical Environmental Concern and the Upper Burro Creek Wilderness Area.

Areas adjacent to Francis Creek have been classified as having low mineral potential (Upper Sonoran Final Wilderness Environmental Statement, 1987). To the southeast, the area surrounding Bagdad is classified as having high mineral potential and has produced copper, molybdenum, manganese, gold, and silver.

The projected minerals scenario assumes the development of one small mine in the next 20 years covering an estimated four acres. This mine would employ four to six people and have up to three miles of access roads on public land.

Impacts on outstandingly remarkable scenic values.

Francis Creek is distinguished by outstandingly remarkable scenic values that include cliffs within a narrow canyon, rugged landforms, a perennial flow, riparian vegetation, and undeveloped shorelines through much of its course.

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The requirement of approved plans of operations for all locatable mineral development, above the level of casual use, on 400 acres outside the wilderness area and area of critical environmental concern, would ensure that protection of outstandingly remarkable values would be taken into account in the development of small mines, as well as any larger projects.

In accordance with the Wild and Scenic Rivers Act, the Bureau of Land Management would require that mineral development be conducted to minimize surface disturbance, pollution, sedimentation, and visual degradation.

Mining patents would be restricted to the mineral estate on 1,360 acres. This would provide protection to the outstandingly remarkable scenic values by ensuring that surface lands would remain under federal administration.

New hydroelectric power facilities, dams, major diversions, and levees would be prohibited on 4.2 miles of Francis Creek. Maintenance of existing facilities would be permitted. This would protect the perennial flow, preserve the canyon, and maintain the outstandingly remarkable scenic values.

New transmission lines would be discouraged. Where no reasonable alternate route exists, additional or new facilities would be restricted to existing rights-of-ways. While discouragement is not the same as prohibition, the applicant would be encouraged to consider alternate routes. This would help protect those scenic values that could be damaged by the presence of new transmission lines. The Bureau of Land Management would require that new utility lines be constructed so as to minimize adverse impacts on outstandingly remarkable scenic values.

Additional protection for the outstandingly remarkable scenic values would be provided by ongoing management activities described in Chapter II. For example, acquiring up to 400

acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable scenic values on the acquired lands.

• Conclusion

There would be no adverse impacts to outstandingly remarkable scenic values from the implementation of the All Suitable Alternative. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable values.

Impacts on outstandingly remarkable fish and wildlife habitat values.

The riparian habitat in the Francis Creek study area supports over 200 fish and wildlife species, including a native fish population and an abundance of raptors and other birds. There are at least eight federally-listed or candidate species.

The requirement of approved plans of operations for all locatable mineral development above the level of casual use, on 400 acres outside the wilderness area and area of critical environmental concern, would ensure that protection of outstandingly remarkable values would be taken into account in the development of small mines as well as any larger projects.

In accordance with the Wild and Scenic Rivers Act, the Bureau of Land Management would require that mineral development be conducted to minimize surface disturbance, pollution, sedimentation, and visual degradation.

Mining patents would be restricted to the mineral estate on 1,360 acres. This would provide protection to the outstandingly remarkable fish and wildlife habitat values by ensuring that surface lands would remain under federal administration.

New hydroelectric power facilities, dams, major

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diversions, and levees would be prohibited on 4.2 miles of Francis Creek. Maintenance of existing facilities would be permitted. This would protect the perennial flow, preserve the riparian vegetation, and maintain the outstandingly remarkable habitat values.

New transmission lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way. While discouragement is not the same as prohibition, the applicant would be encouraged to consider alternate routes. This would help protect those fish and wildlife habitat values that could be damaged by the construction or presence of new transmission lines. The Bureau of Land Management would require that new utility lines be constructed to minimize adverse impacts on outstandingly remarkable fish and wildlife habitat values.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be provided by ongoing management activities described in Chapter II. For example, acquiring up to 400 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable values on the acquired lands.

Prohibitions on roads, helicopter flights, and intensive recreational activities near bald eagle nests would protect wintering and breeding eagles from disturbance by human activities.

• Conclusion

There would be no adverse impacts to outstandingly remarkable fish and wildlife habitat values from the implementation of the All Suitable Alternative. A beneficial impact would result from long-term legislative protection of the outstandingly remarkable values.

Impacts on Mineral Development

There are no known areas of high mineral

potential in the immediate vicinity of Francis Creek. To its southeast, the area surrounding Bagdad is classified as having high mineral potential and has produced copper, molybdenum, manganese, gold, and silver. Due to its low mineral potential, future exploration and mining activities are expected to be very limited in the immediate vicinity of Francis Creek.

The projected minerals scenario assumes the development of one small mine in the next 20 years covering an estimated four acres. This mine would employ four to six people and have up to three miles of access roads on public land.

The 480 acres in the Upper Burro Creek Wilderness are withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals. Another 480 acres are recommended for withdrawal from new mineral entry in accordance with the Burro Creek Riparian and Cultural Area of Critical Environmental Concern. Bureau of Land Management approval of plans of operations would be required for all mineral activities, above the level of casual use, in both areas.

In the area of critical environmental concern, mineral material disposals would be prohibited, and no surface occupancy stipulations required for mineral leases.

The 400 acres outside the wilderness area and the area of critical environmental concern would remain open to mineral entry, leasing, and material disposals. Approved plans of operations would be required for all mining related activities above the level of casual use.

In accordance with the Wild and Scenic Rivers Act, the Bureau of Land Management would require that mineral development be conducted so as to minimize surface disturbance, pollution, sedimentation, and visual degradation.

Subject to valid existing rights, mining patents would be restricted to the mineral estate and

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not the surface estate on 1,360 acres in accordance with the Wild and Scenic Rivers Act.

• Conclusion

Due to its low mineral potential, future exploration and mining activities are expected to be very limited in the immediate vicinity of Francis Creek. There would be no adverse impacts on mineral development from implementation of the All Suitable Alternative.

Impacts on the Economic Stability of Bagdad.

Bagdad is an unincorporated community in west-central Yavapai County. The town is closely tied to the copper mining responsible for its establishment. Bagdad's major economic activities are mining and education. In 1990, there were 736 people in the Bagdad civilian labor force, employed primarily by the Cyprus Bagdad Mine.

Francis Creek provides approximately 85 percent of Bagdad's community water requirements. The Cyprus Bagdad operation makes use of water rights on the Big Sandy River and Francis Creek. A 12-inch water pipeline and a 2-inch gas pipeline serving Bagdad parallel the lower portion of Francis Creek to a water pump station midway up the creek in the study area. The gas-powered water pump is scheduled to be replaced by an electric

pump. Electricity would be brought to the site by a single-pole two-wire utility line.

Under the All Suitable Alternative, new rights-of-way would be confined to existing corridors. New utility lines would be discouraged unless authorized by other laws or plans. While discouragement is not the same as prohibition, the applicant would be encouraged to consider alternate routes. The Bureau of Land Management would require that new utility lines on public land be constructed so as to minimize adverse impacts on outstandingly remarkable scenic, and fish and wildlife habitat values.

Implementation of the All Suitable Alternative would not have a substantive effect on the City of Bagdad or the Cypress Bagdad mining operations. There is a potential for minor adverse impacts associated with the discouragement of new utility lines and the requirement that facilities be constructed so as to minimize adverse impacts on outstandingly remarkable values. These factors might increase some of the costs associated with the planning and construction of new facilities. However, existing water rights and rights-of-way would not be affected.

• Conclusion

There would be no adverse impacts on the economic stability of Bagdad from implementation of the All Suitable Alternative.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Francis Creek Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Kingman Resource Management Plan (1993) that Francis Creek was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Kingman Resource Management Plan is on file at the Kingman Resource Area Office, Kingman, Arizona, and the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St. George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Francis Creek study area were held in Bagdad April 5, 1993 and Phoenix on April 14. Ninety-five to 100 people attended the Bagdad meeting and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings

for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made

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personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

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C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson acted as project manager.

FRANCIS CREEK WILD AND SCENIC RIVER STUDY AREA

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Bureau of Land Management, 1994

**GILA BOX: GILA RIVER
WILD AND SCENIC RIVER STUDY AREA**

**GILA RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



GILA BOX: GILA RIVER WILD AND SCENIC RIVER

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GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Gila Box: Gila River Wild and Scenic River Study Area were identified in the Safford District Resource Management Plan (1993) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine whether these portions of the Gila Box: Gila River should be recommended to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Gila Box: Gila River study area is in southeastern Arizona 15 miles northeast of Safford in Graham and Greenlee Counties. The area is called the Box because of the deep, narrow, twisting canyon that the river flows through in this area. The three segments of the Gila Box: Gila River under consideration are 26.6 miles long extending from the NE1/4 Sec.3, T.6S. R.30E downstream to the SW1/4 Sec.29 T.6S. R.28E. These segments were determined to be eligible in the Safford District Resource Management Plan because they are free flowing and have remarkable scenic, recreation, fish and wildlife, historic and cultural resource, geologic, and hydrologic values.

The Gila River is in the Basin and Range Physiographic Province in a transition zone between the Sonoran and Chihuahuan biotic communities. Consequently the study area is characterized by high biological diversity. This river drains approximately 7,896 square miles of eastern Arizona and western New Mexico.

Segment 1 is 6.9 miles long with 0.9 miles on private land. This segment begins in the NW1/4 Sec.3, T.6S. R.30E and extends downstream to the SE1/4 Sec.26, T.5S. R.29E. Approximately 1,940 acres of this segment are in public ownership and 300 acres are in private ownership. This area possesses outstandingly remarkable scenic, recreation, fish and wildlife, hydrologic and geologic values.

This segment is very scenic and is a popular starting point for people floating the river. Vehicle access to the area is provided by four roads. The old Safford-Clifton Road that crosses the river, at the historic bridge, downstream of Owl canyon is the most commonly used access route. Several foot/horse trails lead into this section of the river. A small picnic site located near the old Safford-Clifton bridge receives some overnight use during the float season. A 230 kV powerline crosses the river in the upper end of the segment. A telephone line to private property crosses the river twice between Guthrie and the bridge. A small powerline (7.2 kV) also crosses the river twice at about the same location as the telephone line. An abandoned railroad grade also parallels the river for about 2-1/2 miles on the upper end of the segment. The U.S. Geological Survey operates two stream gauges in this segment. Two ranch headquarters are located in this segment.

The ranch headquarters and only a few other minor developments are found along the river. The roads and these developments do not significantly affect the natural characteristics or outstanding values of the area. The river in this area is free from impoundments and the shorelines are mostly primitive and undeveloped. Segment 1 has been tentatively classed as Scenic in the Safford District Resource Management Plan.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

Segment 2 is 15.2 miles long with 0.2 miles located on private land. This segment begins in the SE1/4 Sec.26, T.5S. R.29E. and continues downstream to the NE1/4 Sec. 22, T.6S.,R.28E. It contains 4,250 acres of public land and 190 acres of private land. Outstandingly remarkable scenic, recreation, fish and wildlife, historic and cultural, hydrologic, and geologic values are found along this portion.

This segment is free of impoundments, remote and generally accessible only by four wheel drive, trail, or floating the river. The shoreline is primitive and undeveloped with little evidence of human activity. There are three four wheel drive roads in the study area. One is in the upper end of the segment, leading to Gillard Hot Springs. However, it is no longer passable to the river. The other two primitive roads are in the extreme lower end of the segment. One is above the Great Orange Cliffs on the north side of the river, and the other is just upstream of Deadman Canyon on the south side of the river. Segment 2 has been tentatively classified as Wild in the Safford District Resource Management Plan.

Segment 3 is 4.5 miles long and contains 1,270 acres of public land and 10 acres of private land. This segment begins in the NE1/4 Sec. 22, T.6S.,R.28E. and runs downstream to the SW1/4 Sec.29, T.6S., R.28E. This area possesses outstandingly remarkable scenic, recreation, fish and wildlife, hydrologic and geologic values.

Segment 3 is free-flowing, free of impoundments and accessible by road in five places. It includes a popular take-out point for river runners at Bonita Creek, a picnic site at Spring Canyon, evidence of the Dorothy B mining operation, a City of Safford water pipeline spanning the river, and a U.S. Geological Survey river flow measuring station that includes a cable car that spans the river. The shoreline remains largely undeveloped and primitive. The existing roads and developed sites do not significantly affect the natural character or outstanding values of this area. Segment 3 has been tentatively classed as Scenic in the Safford District Resource Management Plan.

**TABLE GBR-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

GILA RIVER GILA BOX	BLM	PRIVATE	TOTAL
TOTAL MILES	25.5	1.1	26.6
PERCENT	96	4	100
TOTAL ACRES	7,460	500	7,960
PERCENT	94	6	100
SUBSURFACE MINERALS ACRES	7,480	480	7,960

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The Arizona Desert Wilderness Act of 1990 included the majority of these segments of the Gila Box: Gila River in the Gila Box Riparian National Conservation Area. Approximately 50 percent (3-4 miles) of segment 1 extends upstream of the riparian national conservation area boundary. All of segments 2 and 3 are within the riparian national conservation area.

The purpose of the riparian national conservation area as stated in the Act is to protect, conserve and enhance the recreational, cultural, scientific etc. values of the area. The Bureau of Land Management was directed by this Act to prepare a management plan for the area. The draft management plan was released for public comment in 1993. The Act also reserved a quantity of water for the riparian national conservation area sufficient to achieve the stated purposes.

**TABLE GBR-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE GILA BOX: GILA RIVER
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

GILA BOX: GILA RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Gila Box National Riparian Conservation Area	6,050	76

2. Federal agencies

The Bureau of Indian Affairs is involved in the management of the San Carlos Apache Indian Reservation. Water rights in the Gila River Basin are under litigation in state and federal court. The San Carlos Tribe, supported by the Bureau of Indian Affairs, is claiming ownership of substantial quantities of Gila River water.

Box: Gila River with the Arizona Department of Water Resources in December, 1988. The application requests 439 cubic feet per second flow year round. The beneficial uses identified in this application include fish habitat for threatened and endangered species, wildlife, riparian and recreation. The application has been protested by the San Carlos Irrigation and Drainage District and the protest remains unresolved.

The United States Fish and Wildlife Service designated part of the Gila River, including these three segments, as Critical Habitat for the endangered Razorback sucker in March, 1993. This designation has management implications under the Endangered Species Act that may affect some of the traditional uses of the area. These segments are also identified as a reintroduction site in the woundfin minnow recovery plan.

Arizona Game and Fish Department coordinates with Bureau of Land Management in managing fish and wildlife in the Gila Box area.

3. State

The Bureau of Land Management filed an instream flow water right application for the Gila

4. County

The Gila Box area is in Graham and Greenlee Counties.

5. Private

Several parcels of private property exist within this segment. They include two historic operating ranches. All parcels have been

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

identified for acquisition by the Bureau of Land Management in the Safford District Resource Management Plan.

D. SCOPING

Scoping meetings specifically highlighting the Gila Box Wild and Scenic Study Area were held in Phoenix on April 14, 1993, Clifton April 19, 1993, and Safford, April 20, 1993. Fifty-five to 60 people attended the Phoenix meeting, and about 50 attended each meeting in Clifton and Safford.

The issues concern the impacts of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values. Uses or resources raised as issues specifically for this study area include:

Scoping Issues

- impacts on existing water rights
- impacts on the future development of dams for flood control or water storage
- impacts to Federal agencies (cost of management)
- impact on the value and use of private property
- impacts of dual riparian national conservation area and wild and scenic river designation
- Too many rivers in Graham County are being considered for designation
- Need to make the evaluation and designation process more open to the public
- Need process to remove rivers from the list
- impacts on grazing
- impacts on tourism
- impact on potential commercial and residential development in towns and cities
- impacts on the expansion of the Greenlee County airport
- impacts on access to public lands
- impacts on outstandingly remarkable scenic and geologic values

- impacts on outstandingly remarkable recreation values
- impacts on outstandingly remarkable fish and wildlife values
- impacts on outstandingly remarkable historic and cultural resource values
- impacts on outstandingly remarkable hydrologic values (water resources)
- impacts on riparian resources
- impacts on mineral development
- impacts on upland vegetation values

Issues Considered but not Analyzed

- impacts on existing and future water rights

A federal reserved water right was granted to the portion of the Gila Box: Gila River designated as the Gila Box Riparian National Conservation Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right is on-going and the Bureau of Land Management will submit notification to the State of Arizona.

The Bureau of Land Management filed an instream flow water right application for the Gila Box: Gila River with the Arizona Department of Water Resources in December, 1988. The application requests 439 cubic feet per second flow year round. The beneficial uses identified in this application include fish habitat for threatened and endangered species, wildlife, riparian and recreation. The application has been protested by the San Carlos Irrigation and Drainage District and the protest remains unresolved.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further

• impacts to anticipated water rights transfers by Phelps Dodge Corporation.

In the next 20 years it is anticipated that Phelps Dodge Corporation will transfer the point of diversion of their water rights on Eagle Creek, the San Francisco River, and the upper Gila River from upstream of the study area to a downstream location in the Safford Valley for use in the Dos Pobres and Lone Star mines. Later they may want to move the point of diversion upstream of the study area. These water rights are for 52,600 acre feet per year (72.6 cubic feet per second). A portion of this water will flow through the Gila Box: Gila River Study Area.

Bureau of Land Management hydrologists and resource specialists do not believe that the addition or deletion of this amount of water will have significant impacts on the outstandingly remarkable values of the study area.

This issue will not be discussed further.

• impacts on the future development of dams for flood control or water storage

In 1962, Congress authorized construction of the Camelsback Dam and Reservoir. The proposed location is in Segment 2, about five miles upstream of Bonita Creek. For many years, an application to withdraw lands for construction of the dam and reservoir was pending, awaiting funding of the project. That application expired in 1991.

When Congress designated the Gila Box Riparian National Conservation Area, the lands in the national conservation area were withdrawn from appropriation and entry under the public land, mining, and mineral leasing laws. With closure of the lands to entry and appropriation, future application for withdrawal for construction of the dam and reservoir is no longer possible. It is not expected that Camelsback Dam will be constructed in the foreseeable future.

This issue will not be discussed further.

• impacts on the private property base

Acquisition of 500 acres of non-federal land in the study area is a management objective in the draft Gila Box Interdisciplinary Activity Plan. This plan has undergone thorough public review. The Safford District Resource Management Plan identifies more public land in Graham County for disposal than private land for acquisition. No additional land in the study area will be identified for acquisition if the Gila Box: Gila River is designated under the Wild and Scenic Rivers Act.

The acquisition of 500 acres of non-federal land in the study area will not result in a significant impact to the private property base in Graham County.

The acquisition process would only move forward and be completed on a willing seller-willing buyer basis.

The issue of impacts on the private property base will not be discussed further.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Impact on the value and use of private property.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There are no impacts expected on private property values or uses from implementation of the alternatives.

This issue will not be discussed further.

- impacts to Federal agencies (cost of management)

The Wild and Scenic Rivers Act requires that all eligible rivers be considered for inclusion in the National Wild and Scenic Rivers System.

This issue will not be considered further.

- impacts of dual riparian national conservation area and wild and scenic river designation

There would be no environmental impacts from dual management designation since the management actions would always comply with the most stringent requirements for the area. For example, in a segment designated as a wild river which also is under national riparian conservation area management, mineral entry would be closed due to the wild river designation regardless of guidance in the area of riparian national conservation area.

This issue will not be discussed further.

- Too many rivers in Graham County are being considered for designation

The rivers in Graham County on lands administered by the Bureau of Land Management were studied for eligibility and analyzed as part of the resource management planning process. Public review and comments on the draft resource management plan were considered in the decision making process.

This issue will not be considered further.

- Need to make the evaluation and designation process more open to the public

The Bureau of Land Management has rigorously followed appropriate requirements in its scoping and public review processes for wild and scenic river eligibility determination and suitability recommendation. The process encourages public input and is described in detail in the sections on scoping and public involvement in this document.

This issue will not be discussed further.

- Need process to remove rivers from the list

Congressional action is required to designate rivers into the National Wild and Scenic Rivers System. Congress also has the authority to revise the list.

This issue will not be discussed further

- impacts on grazing

Portions of eight livestock grazing allotments are in the study area. The portion of the allotment actually in the study area varies by allotment from less than one percent to 51 percent. The actual percentage of the allotment in the study area that is grazed, however, is even lower due to the steep terrain in most allotments.

The Bureau of Land Management's management emphasis has been on controlling livestock use in the river bottom. Allotment management plans have been developed and

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

have changed the traditional, unrestricted yearlong use to managed, seasonal use through grazing systems and riparian pastures in many allotments. Water sources have been developed on the uplands to reduce dependency on water in the river. Currently, six of the nine allotments are under a grazing system.

On-going management will lead to exclusion of livestock from 11 miles of riparian area in the lower end of the study area from Camel Back downstream to the end of the study area (part of Segment 2 and Segment 3). Livestock grazing will occur on a limited basis in the wintertime in 15 miles of riparian area from Guthrie to Camelsback (Segment 1 and part of Segment 2). To implement this plan, 8 miles of upland pasture and 12 miles of riparian pasture fence will be constructed.

This grazing strategy is designed to reduce impacts to the riparian areas while maintaining good to excellent conditions in the uplands. This will require increased efforts for maintenance and livestock handling.

However, the increased efforts for maintenance and livestock handling should be offset by increased productivity. Designation of the Gila as a wild and scenic river is not expected to affect on-going grazing management in the area.

This issue will not be discussed further.

- Impacts on tourism

Upward trends in recent visitor use, proposed development of new recreation sites, proposed improvements in access to the area, increased public awareness of the area associated with designation of the Gila Box Riparian National Conservation Area, and a wild and scenic river designation lead Bureau of Land Management specialists to conclude a moderate increase in visitor use of the area can be expected in foreseeable future.

However, by itself the wild and scenic river designation is not expected to lead to a substantial increase in tourism.

This issue will not be discussed further.

- Impact on potential commercial and residential development in towns and cities

Implementation of the alternatives is not expected to change current commercial and residential conditions because Bureau of Land Management actions apply only to federal lands under Bureau of Land Management administrative responsibility. Actions taken under the Wild and Scenic Rivers Act would not apply to private or state lands.

This issue will not be discussed further.

- Impacts on the expansion of the Greenlee County airport

The expansion of Greenlee County to include landings by commercial jet aircraft **would not be affected by wild and scenic river designation. The Wild and Scenic Rivers Act does not authorize federal agencies to regulate or control activities on nonfederal lands.**

This issue will not be discussed further.

- Impacts on access to public lands
- Implementation of the alternatives will not affect access to the study area. Access to the area is addressed in the Safford District Resource Management Plan and the draft Gila Box Interdisciplinary Activity Plan.

Access to the Gila Box is primarily provided by the Sanchez Road to the mouth of Bonita Creek and the old Safford-Clifton Road that crosses the river downstream of Owl Canyon. These roads are well maintained gravel passable for passenger vehicles. Roads to the more remote sections of the river such as Black Canyon or Gillard Hot Springs require high clearance

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

and/or four wheel drive to be negotiated safely.

Under the draft Gila Box Management Plan nine existing roads will be maintained or improved, one new road will be constructed in the upland areas, and the number of miles of roads in the riparian areas will be reduced by 95 percent from 26.6 miles to 1.2 miles. Access to the area will be provided by a better maintained, more ecologically sensitive transportation system, along with added scenic drives and improved

comfort and safety. The alternatives in this document will not change that action.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Gila Box study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to multiple use management.

The following alternatives are analyzed:

Recommended alternative
All suitable
No action/not suitable

B. RECOMMENDED ALTERNATIVE

The recommended alternative recommends segment 1 and 3 of the Gila Box: Gila River study area suitable for designation with a Recreational classification, and segment 2 suitable for designation with a Scenic classification.

The 6,050 acre-Gila Box study area is contained within the boundaries of the Gila Box Riparian National Conservation Area. This area was established by the Arizona Desert Wilderness Act of 1990 and is managed by the Bureau of Land Management under the Gila Box Interdisciplinary Activity plan. About 11 percent of the river study area (1,410 acres of segment 1) is upstream of the Conservation Area boundary. The purpose of the Act is to protect, conserve, and enhance the riparian and associated areas and the aquatic, wildlife,

archaeological, paleontological, scientific, cultural, recreational, educational, scenic, and other resources and values of this area.

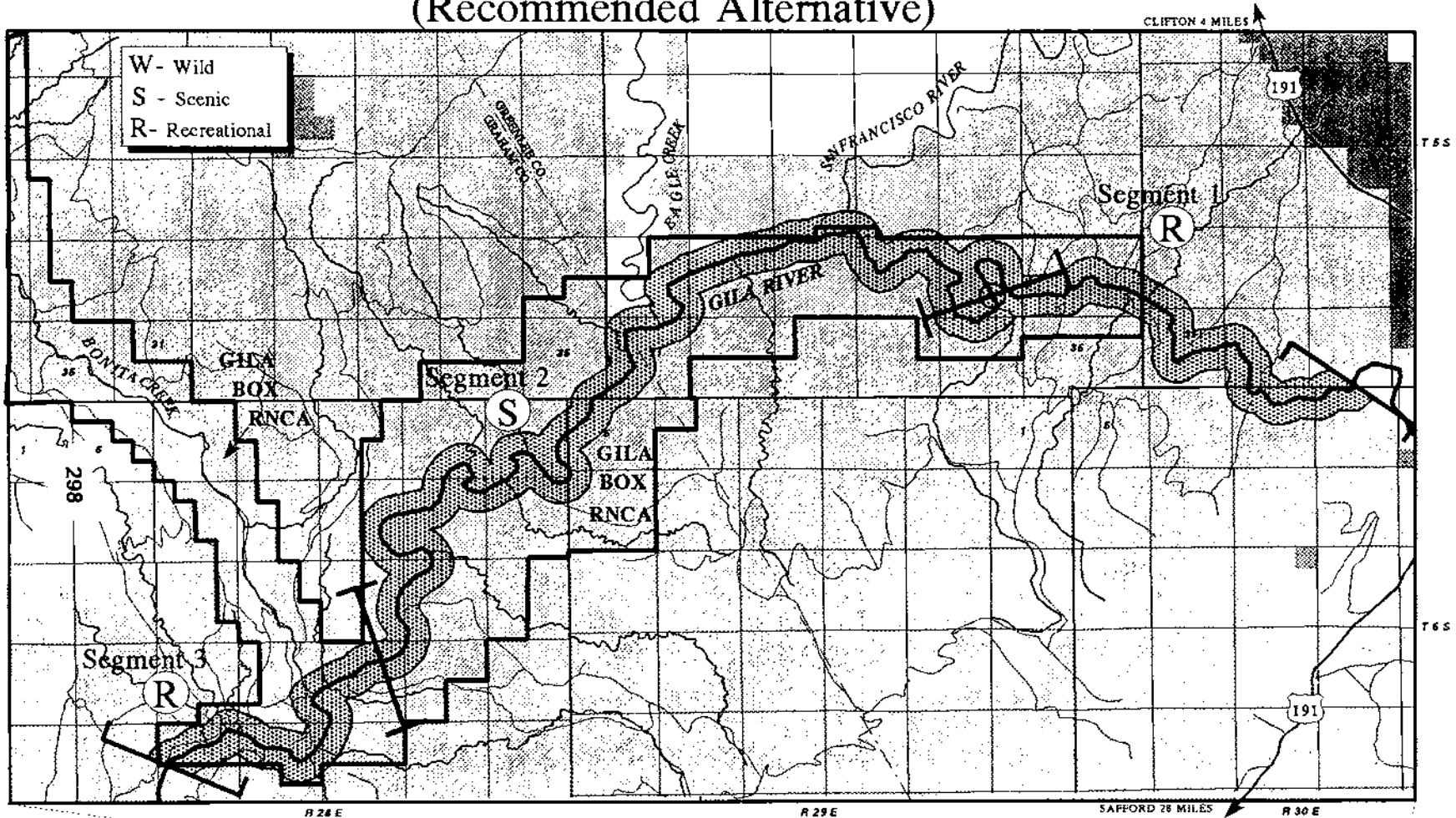
Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur as a result of the designation of segments of the Gila Box as Scenic and Recreational. If the actions overlap ongoing management actions the most restrictive would apply.

- New mining claims and mineral leases would be allowed.
- Mining claims would be restricted to patents on the mineral estate.
- New hydroelectric power facilities would be prohibited. Flood control dams and levees would be prohibited.
- Water supply dams and major diversions would be prohibited. Maintenance of existing facilities and construction of some new structures would be permitted.
- New transmission lines, natural gas lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of way.
- Motorized travel would be permitted if there was no impairment of outstandingly remarkable values in Scenic river areas. Recreational river areas have no constraints on motorized use as long as the outstandingly remarkable values are not impaired.

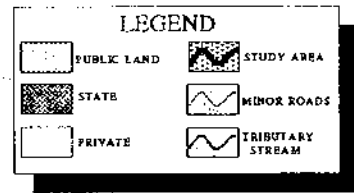
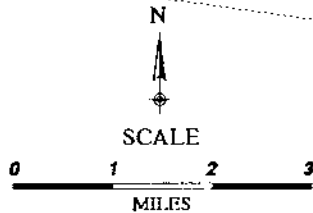
GILA RIVER (GILA BOX)

(Recommended Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

October 1994



GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Roads or trails would be allowed in Scenic Areas. Roads in the corridor that parallel the river in Recreational river areas would continue to be maintained.
- Livestock grazing use would be permitted.
- Moderate size campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged in Scenic river areas but public use and access may be regulated to protect and enhance scenic river values.
- Water quality would be maintained or improved.
- Instream flow would be quantified. An assessment would be initiated to secure instream flows to protect outstandingly remarkable values.

Ongoing management actions

Ongoing management actions in the Gila Box: Gila River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Gila Box Riparian National Conservation Area and the Safford District Resource Management Plan.

- The portion of this river study area within the Gila Box Riparian National Conservation Area was closed to future mineral entry by the Arizona Desert Wilderness Act of 1990.
- The three miles of segment 1 (Scenic) outside the conservation area boundary will remain open to mineral entry. The sale of mineral material (sand and gravel) will be prohibited in the riparian area. A no surface occupancy stipulation for leasable minerals will also apply to the riparian area.
- Existing valid claims will continue to be recognized. The block of 23 claims constituting the Dorothy B mining claim will be subjected to a validity exam.
- Nine of the 12 existing roads will be maintained or improved. Primary access routes, the old Safford-Clifton road and the Sanchez road, will be useable by passenger vehicles.
- The Kearny Camp road will be upgraded for passenger vehicle use.
- The Wire Corral Mesa extension road will be constructed in the upland area.
- The number of miles of roads in the riparian areas will be reduced by up to 95 percent from 26.6 miles to 1.2 miles.
- Existing rights-of-ways consisting of five utility corridors will remain in place.
- Six parcels of private land (500 acres) identified for acquisition will be obtained on a willing buyer willing seller basis.
- The area will continue to provide dispersed recreation activities such as river running, hiking, birdwatching, sight seeing, horseback riding, camping and picnicking.
- Two campgrounds, three picnic areas, one hiking trail, and two boat launching sites will be built. The two existing picnic sites will continue to operate.
- Develop the Orange Cliff overlook and Gillard Hot Springs area.
- Provide Gila Box: Gila River access parking upstream of Deadman Canyon.
- Off highway vehicle use is limited to designated roads.
- Inventories and studies will be done to monitor populations and establish relationships

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

between species and habitat parameters.

- Habitat impacts from grazing will be reduced through a combination of excluding livestock from the riparian area downstream of the Camelsback (approximately 11 miles) and seasonal grazing systems designed to reduce impacts on the riparian areas upstream of Camelsback (approximately 15 miles).
- The reduction in the miles of riparian roads by up to 95 percent (25.4 miles) will also contribute to improved riparian and aquatic habitat characteristics.
- Recreation developments and activities will be primarily located in upland areas and designed to prevent conflicts with wildlife.
- Priority as well as threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.
- Vegetation and will be protected in specific locations such as around recreation developments.
- No woodcutting is allowed in the approximately 550 acres of riparian vegetation found in the study area.
- Riparian zone roads will be located in stable areas and total mileage reduced by as much as 95 percent, from 26.6 miles to 1.2 miles.
- Major recreation developments such as campgrounds and trailheads will be located in upland areas away from the riparian zone.
- Boat launching sites will be located in hydrologically stable areas in the riparian zone.
- Upland vegetation will be managed under the desired plant community concept to achieve good to excellent ecological condition and healthy watersheds.

- Conduct a Class III inventory of the Gila Box: Gila River study area.
- Complete an ethnoecology study of the Gila Box: Gila River Study area.
- Interpret the historic Gillard Hot Springs resort area.
- Monitor cultural sites within the study area periodically.
- All new proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area will be completed. If sites are evaluated as eligible for the National Register of Historic Places, they will be avoided by the proposed activity.
- If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Water quantity will be protected through the acquisition of instream flow water rights for 439 cubic feet per second from the state and the quantification of the federal reserve water right granted in the Arizona Desert Wilderness Act of 1990.
- Water quality will be protected through monitoring at selected sites for compliance with Arizona state standards.
- Grazing will continue in about 15 miles of the river study area.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Management actions include excluding grazing from about 11 miles of the riparian zone downstream of the Camelsback, seasonal use in about 15 miles of the riparian area upstream of Camelsback, and development of facilities such as water sources and fences in the uplands.

C. ALL SUITABLE

The all suitable alternative recommends segments 1 (1,940 acres) and 3 (1,270 acres) of the Gila Box: Gila River study area as suitable for designation with a Scenic classification and segment 2 (4,250 acres) as suitable for designation with a Wild classification.

6,050 acres of the 7,060-acre Gila Box study area is contained within the boundaries of the Gila Box Riparian National Conservation Area. This area was established by the Arizona Desert Wilderness Act of 1990 and will be managed by the Bureau of Land Management under the draft Gila Box Interdisciplinary Activity plan. About 11 percent of the river study area (50 percent of segment 1) is upstream of the Conservation Area boundary. The purpose of the Act is to protect, conserve, and enhance the riparian and associated areas and the aquatic, wildlife, archaeological, paleontological, scientific, cultural, recreational, educational, scenic, and other resources and values of this area.

Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur as a result of the designation of segments of the Gila Box as Wild and Scenic. If the actions would reflect ongoing management actions the most restrictive would apply.

- In wild segments new mining claims and mineral leases would be prohibited. Valid existing claims would be recognized and existing mining activity would be allowed to continue.

- New mining claims and mineral leases would be allowed in Scenic segments.

- Mining claims would be restricted to patents on the mineral estate.

- New hydroelectric power facilities would be prohibited.

- New flood control dams and levees would be prohibited.

- Water supply dams and major diversions would be prohibited. Maintenance of existing facilities and construction of some new structures would be permitted in Scenic segments.

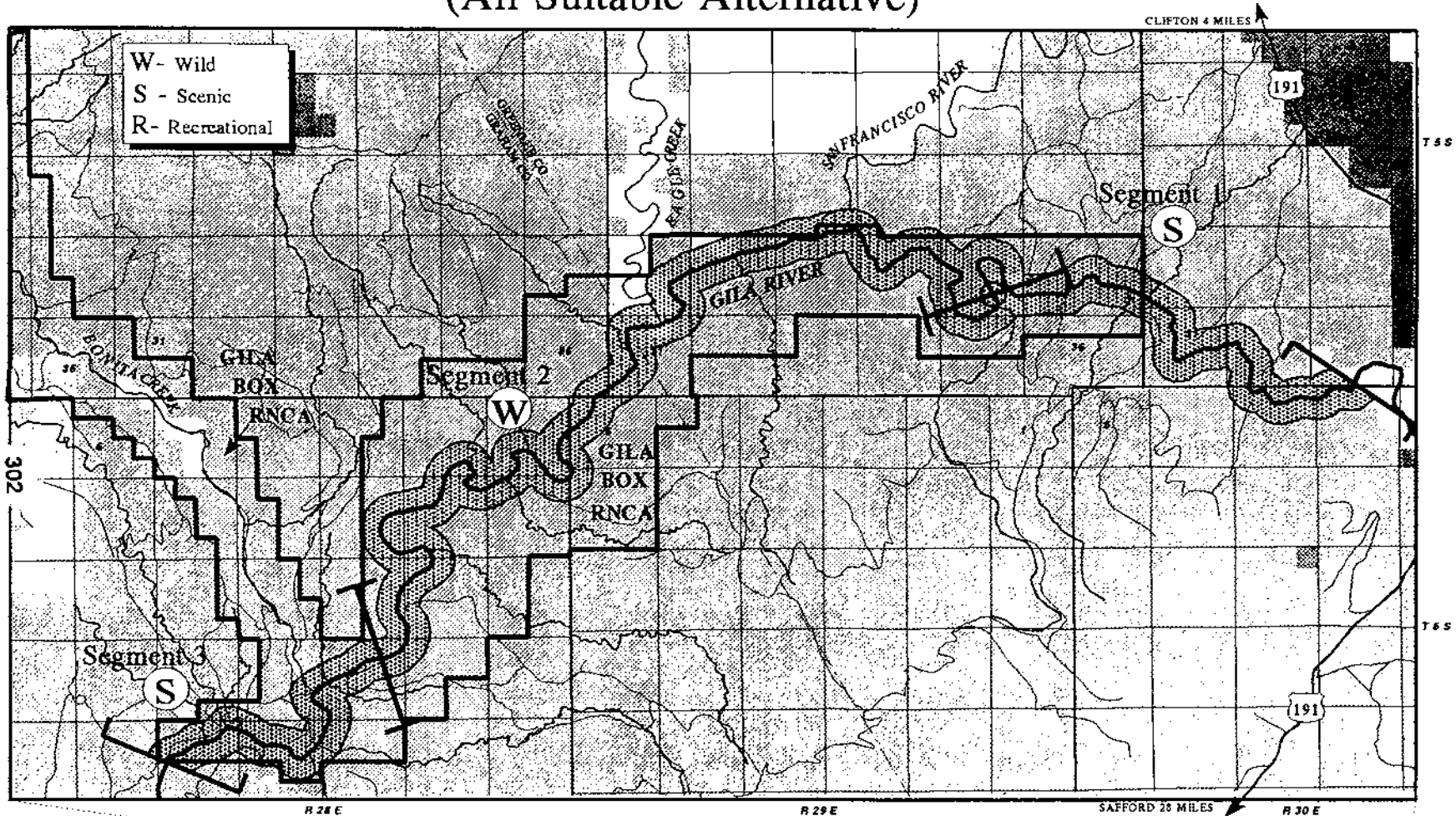
- New transmission lines, natural gas lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way.

- Normally, motorized use would be prohibited in a Wild river area. Exceptions could be for search and rescue and other emergency situations.

- Motorized travel in Scenic segments would be permitted if there was no impairment of outstandingly remarkable values in Scenic River Areas. Recreational River Areas have no constraints on motorized use.

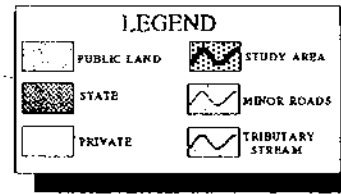
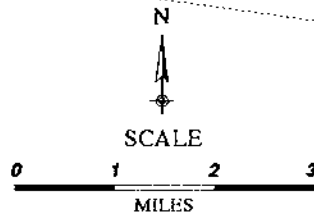
GILA RIVER (GILA BOX)

(All Suitable Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

October 1994



GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Construction of new roads or trails for motorized travel would be prohibited in wild segments.
- Roads or trails would be allowed in Scenic Areas. Roads in the corridor that parallel the river in Recreational Areas would continue to be maintained.
- Livestock grazing use would be permitted.
- Moderate size campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged in Scenic river areas but public use and access may be regulated to protect and enhance scenic river values.
- Water quality would be maintained or improved.
- Instream flow would be quantified. An assessment would be initiated in order to secure instream flows to protect outstandingly remarkable values.

Ongoing management actions

Ongoing management actions in the Gila Box: Gila River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the draft Interdisciplinary Activity Plan and the Safford District Resource Management Plan.

- The portion of this river study area within the Gila Box Riparian National Conservation Area was closed to future mineral entry by the Arizona Desert Wilderness Act of 1990.
- The three miles of segment 1 (Scenic) outside the Conservation Area boundary will remain open to mineral entry. The sale of mineral material (sand and gravel) will be prohibited in the riparian area. A no surface occupancy stipulation for leasable minerals will also apply to the riparian area.
- Existing valid claims will continue to be recognized. The block of 23 claims constituting the Dorothy B mining claim will be subjected to a validity exam.
- Nine of the 12 existing roads will be maintained or improved. Primary access routes, the old Safford-Clifton road and the Sanchez road, will be useable by passenger vehicles.
- The Kearny Camp road will be upgraded for passenger vehicle use.
- The Wire Corral Mesa extension road will be constructed in the upland area.
- The number of miles of roads in the riparian areas will be reduced by up to 95 percent from 26.6 miles to 1.2 miles.
- Existing rights of ways consisting of five utility corridors will remain in place.
- Six parcels of private land (500 acres) identified for acquisition will be obtained on a willing buyer willing seller basis.
- The area will continue to provide dispersed recreation activities such as river running, hiking, birdwatching, sight seeing, horseback riding, camping and picnicking.
- Two campgrounds, three picnic areas, one hiking trail, and two boat launching sites will be built. The two existing picnic sites will continue to operate.
- Develop the Orange Cliff overlook and Gillard Hot Springs area.
- Provide Gila Box: Gila River access parking upstream of Deadman Canyon.
- Off highway vehicle use is limited to

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

designated roads.

- Inventories and studies will be done to monitor populations and establish relationships between species and habitat parameters.

- Recreation developments and activities will be primarily located in upland areas and designed to prevent conflicts with wildlife.

- Priority, threatened, and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.

- No woodcutting is allowed in the approximately 550 acres of riparian area within the study area.

- Vegetation will be protected in specific locations such as around recreation developments.

- Impacts to riparian vegetation from grazing will be reduced through a combination of excluding livestock from the riparian area downstream of the Camelsback (approximately 11 miles) and seasonal grazing systems designed to reduce impacts on the riparian areas upstream of Camelsback (approximately 15 miles).

- Major recreation developments such as campgrounds and trailheads will be located in upland areas away from the riparian zone.

- Boat launching sites will be located in hydrologically stable areas in the riparian zone.

- Upland vegetation will be managed under the desired plant community concept to achieve good to excellent ecological condition and healthy watersheds.

- A prescribed natural fire plan will be developed and implemented for upland areas.

- Conduct a Class III inventory of the Gila Box: Gila River study area.

- Complete an Ethnoecology study of the Gila Box: Gila River Study area.

- Interpret the historic Gillard Hot Springs resort area.

- Monitor cultural sites within the study area periodically.

- All new proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist.

- In most cases, a cultural resource field inventory of the potentially affected area will be completed. If sites are evaluated as eligible for the National Register of Historic Places, they will be avoided by the proposed activity.

- If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

- Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

- Water quantity will be protected through the acquisition of instream flow water rights for 439 cubic feet per second from the state of Arizona and the quantification of the federal reserve water right granted in the Arizona Desert Wilderness Act of 1990.

- Water quality will be protected through monitoring at selected sites for compliance with Arizona state standards.

- Grazing will continue in about eleven miles of the riparian area of the river study area.

D. NO ACTION/NOT SUITABLE

The no action alternative recommends the entire

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

Gila Box River Study Area for nondesignation. Implementation of the no action/not suitable alternative would rescind any protective status associated with the eligibility findings, and return the river area to current management.

In this case the majority of the Gila Box study area is contained within the boundaries of the Gila Box Riparian National Conservation Area. This area was established by the Arizona Desert

Wilderness Act of 1990 and is managed by the Bureau of Land Management under the Gila Box Interdisciplinary Activity plan. About 11 percent of the river study area (50 percent of segment 1) is upstream of the Conservation Area boundary.

The purpose of the Act is to protect, conserve, and enhance the riparian and associated areas and the aquatic, wildlife, archaeological, paleontological, scientific, cultural, recreational, educational, scenic, and other resources and values of this area. The draft Gila Box Plan describes the management actions that will be implemented to achieve these purposes.

Wild and Scenic River management actions

The no action/not suitable alternative recommends the segments in the Gila Box as nonsuitable for designation and the outstandingly remarkable values would not be under the long-term legislative protection of the Wild and Scenic Rivers Act.

Ongoing management actions

The ongoing management actions listed below are selected from the management provisions of the Gila Box Riparian National Conservation Area and the Safford District Resource Management Plan. These actions would continue regardless of Congressional decisions on wild and scenic river designations.

- The portion of this river study area within the draft Gila Box Riparian National Conservation

Area was closed to future mineral entry by the Arizona Desert Wilderness Act of 1990.

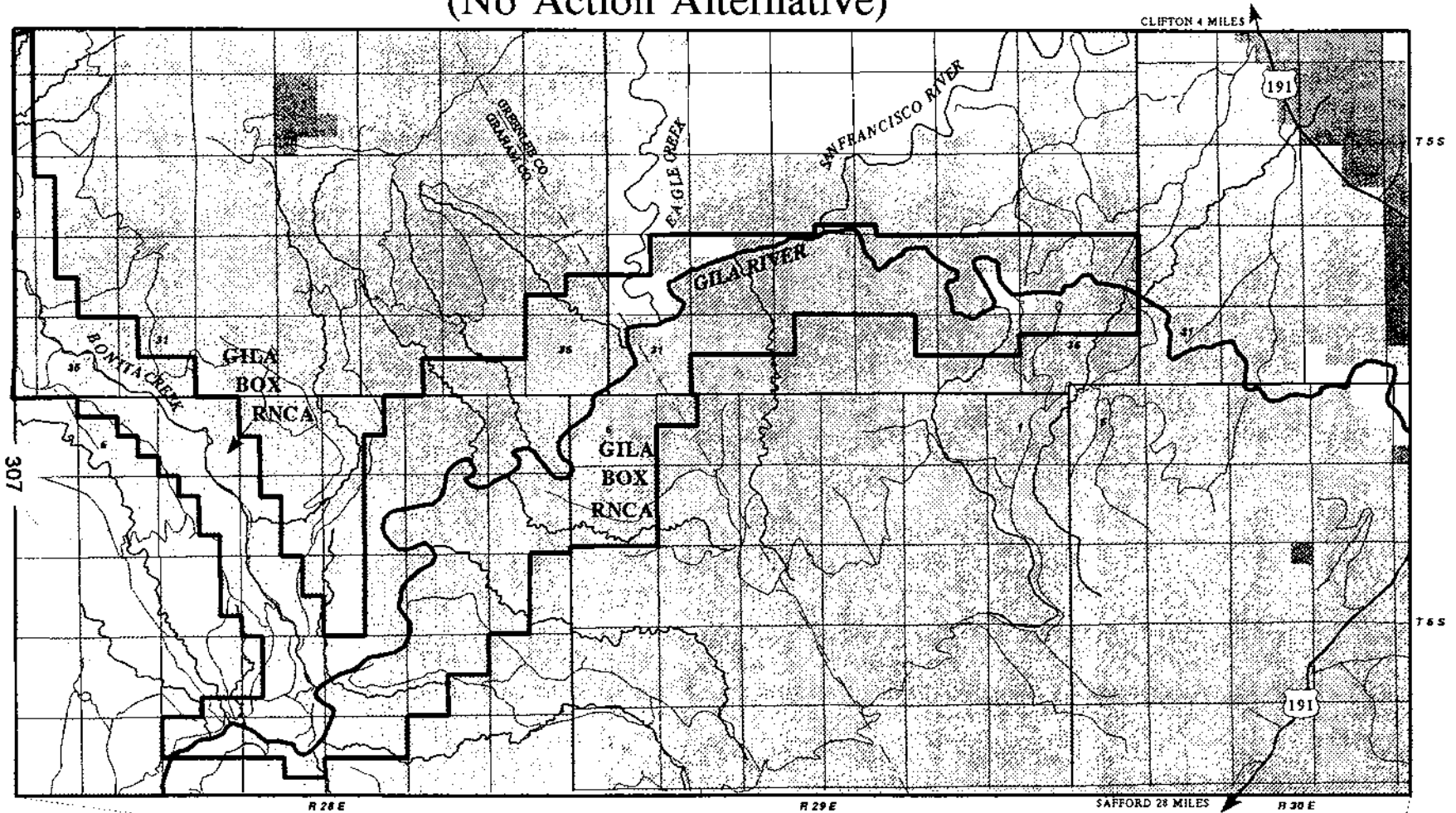
- The three miles of segment 1 (Scenic) outside the Conservation Area boundary will remain open to mineral entry. The sale of mineral material (sand and gravel) will be prohibited in the riparian area. A no surface occupancy stipulation for leasable minerals will also apply to the riparian area.
- Existing valid claims will continue to be recognized. The block of 23 claims constituting the Dorothy B mining claim will be subjected to a validity exam.
- Nine of the 12 existing roads will be maintained or improved. Primary access routes, the old Safford-Clifton road and the Sanchez road, will be useable by passenger vehicles.
- The Kearny Camp road will be upgraded for passenger vehicle use.
- The Wire Corral Mesa extension road will be constructed in the upland area.
- The number of miles of roads in the riparian areas will be reduced by up to 95 percent from 26.6 miles to 1.2 miles.
- Existing rights of ways consisting of five utility corridors will remain in place.
- Six parcels of private land (500 acres) identified for acquisition will be obtained on a willing buyer willing seller basis.
- The area will continue to provide dispersed recreation activities such as river running, hiking, birdwatching, sight seeing, horseback riding, camping and picnicking.
- Two campgrounds, three picnic areas, one hiking trail, and two boat launching sites will be built. The two existing picnic sites will continue to operate.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Develop the Orange Cliff overlook and Gillard Hot Springs area.
- Provide Gila Box: Gila River access parking upstream of Deadman Canyon.
- Off highway vehicle use is limited to designated roads.
- Inventories and studies will be done to monitor populations and establish relationships between species and habitat parameters.
- Habitat impacts from grazing will be reduced through a combination of excluding livestock from the riparian area downstream of the Camelsback (approximately 11 miles) and seasonal grazing systems designed to reduce impacts on the riparian areas upstream of Camelsback (approximately 15 miles).
- Recreation developments and activities will be primarily located in upland areas and designed to prevent conflicts with wildlife.
- Priority, threatened, and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.
- Vegetation and will be protected in specific locations such as around recreation developments.
- No woodcutting is allowed in the approximately 550 acres of riparian vegetation found in the study area.
- Major recreation developments such as campgrounds and trailheads will be located in upland areas away from the riparian zone.
- Boat launching sites will be located in hydrologically stable areas in the riparian zone.
- Upland vegetation will be managed under the desired plant community concept to achieve good to excellent ecological condition and healthy watersheds.. A prescribed natural fire plan will be developed and implemented in upland areas.

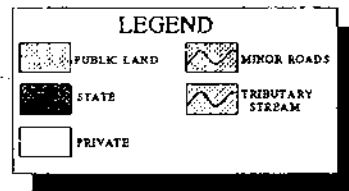
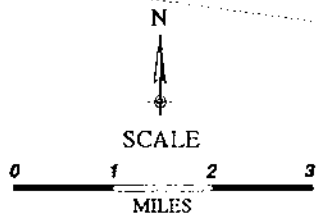
GILA RIVER (GILA BOX)

(No Action Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

October 1994



GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Conduct a Class III Inventory of the Gila Box: Gila River study area.
- Complete an Ethnoecology study of the Gila Box: Gila River Study area.
- Interpret the historic Gillard Hot Springs resort area.
- Monitor cultural sites within the study area periodically.
- All new proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area will be completed. If sites are evaluated as eligible for the National Register of Historic Places, they will be avoided by the proposed activity.
- If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Water quantity will be protected through the acquisition of instream flow water rights for 439 cubic feet per second from the state of Arizona

and the quantification of the federal reserve water right granted in the Arizona Desert Wilderness Act of 1990.

- Water quality will be protected through monitoring at selected sites for compliance with Arizona state standards.
- Grazing will continue in about eleven miles of the riparian area of the river study area.

E. ALTERNATIVES CONSIDERED BUT REJECTED

The Arizona Rivers Coalition recommended an alternative determining 26 miles of the Gila Box: Gila River for inclusion in the National Wild and Scenic Rivers System. The recommendation identified a Scenic designation for the portion of the Gila Box: Gila River from the public land boundary to the west boundary of section 26 private land, a Wild designation for the portion from section 26 land to Deadman Canyon, and a Scenic designation from Deadman Canyon to Spring Canyon.

This alternative is essentially the same as the recommended alternative with minor adjustments in the segment boundaries.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE GBR-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative	All suitable	No action (not suitable)
Impacts on Outstandingly Remarkable Scenic Values	None	None	None
Impacts on Outstandingly Remarkable Recreational Values	Beneficial for all except off highway vehicle use	Beneficial for all except off highway vehicle use	Beneficial for all except off highway vehicle use
Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values	Minor beneficial for fish. High beneficial for wildlife. Minor adverse from increased visitation	Minor beneficial for fish. High beneficial for wildlife. Minor negative from increased visitation	Minor beneficial for fish. High beneficial for wildlife. Minor negative from increased visitation
Impacts on Outstandingly Remarkable Historic and Cultural Resource Values	High beneficial	High beneficial	High beneficial
Impacts on Outstandingly Remarkable Geologic Resource Values	None	None	None
Impacts on Outstandingly Remarkable Hydrologic Values	Minor to moderate beneficial impacts	Minor to moderate beneficial impacts	Minor to moderate beneficial impacts
Impacts on Riparian Resource Values	Beneficial	Beneficial	Beneficial
Impacts on Mineral Values	None	None	None
Impacts on Upland Vegetation	Minor to moderate beneficial	Minor to moderate beneficial	Minor to moderate beneficial

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

A. OUTSTANDINGLY REMARKABLE VALUES

The Safford District Resource Management Plan identified scenic, recreation, fish and wildlife habitat, historic and cultural resources, geologic, and hydrological values as outstandingly remarkable in determining that the Gila Box: Gila River is eligible for consideration as a Wild and Scenic river.

B. MINERAL POTENTIAL

The study area is not in any established mineral district, but lies between large porphyry copper mining districts to the northeast and southwest. The Copper Mountain Mining District is about 5 miles northeast of the study area, around Clifton and Morenci. This is one of the most significant mining districts in the United States.

About three miles southwest of the study area, large tonnages of porphyry copper have been found in the Sanchez, San Juan, Dos Pobres, and Lone Star Mining Districts. These ore bodies are undeveloped, but production is scheduled to begin in the Sanchez District in 1994.

The only existing mining operation in this study area is the Dorothy B located on a block of 23 claims encompassing the confluence of the Gila River and Bonita Creek. This gold placer claim has been worked sporadically in the last two or three decades with little reported success. New exploration activities near the mouth of Bonita Creek have taken place as recently as 1992. According to the U.S. Geological Survey and Bureau of Mines, the potential for placer gold in the study area is rated low to very low. A validity exam is scheduled to be conducted on this claim in 1994.

There are no mineral leases in the study area. The only leasable mineral with production potential in the study area is geothermal energy. The area is not considered a likely source for

other leasable minerals like coal, oil, gas, or phosphate.

The geothermal energy is centered at Gillard Hot Springs, and the surrounding 5,760 acres in the upper end of Segment 2 and lower end of Segment 1. Gillard Hot Springs is the hottest spring in the state with an average surface temperature of 180 degrees F and could be used as a heat source (space heating), but is probably not adequate for electrical generation (Richter, et al, 1982).

The Arizona Desert Wilderness Act of 1990, Title II designated the Gila Box as a Riparian National Conservation Area, withdrew all lands within the riparian national conservation area including most of the three Gila River segments from future mineral entry. Only valid existing claims will continue to be recognized. The future of mining in the majority of the segments depends on the findings of the validity exam on the Dorothy B claim. Portions of these segments outside of the riparian national conservation area boundary, about three miles of segment 1 remain open to mineral entry.

The withdrawal of the majority of these river segments from mineral entry is subject to valid existing rights. If mining claims remain inside the riparian national conservation area, and are shown to be valid as of the date of withdrawal, and of the date of a validity examination, mining could occur.

C. LANDS

Access to the Gila Box is primarily along the Sanchez Road to the mouth of Bonita Creek and the old Safford-Clifton Road that crosses the river downstream of Owl Canyon. These roads are well maintained gravel, passable for passenger vehicles. Roads to the more remote sections of the river such as Black Canyon or Gillard Hot Springs require high clearance and/or four wheel drive to be negotiated safely.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

Segment 1 is accessible by four roads. A four wheel drive jeep trail accesses the upper end of this segment about 1-1/2 miles downstream of Guthrie on the north side of the river. The Old Safford-Clifton Road (Black Hills Back Country Byway) crosses the middle of Segment 1. Two roads provide access to the Subla Ranch (private land) on the lower end of Segment 1. Road access to the private property is from both the north and south sides of the river.

Segment 2 is accessible by three roads. Two of the roads penetrate the study area, but do not reach the river. In the upper end of the segment, a four wheel drive road provides access to Gillard Hot Spring. The lower end of this road cannot be travelled down to the river as the road across a side drainage is washed out. Above the Orange Cliffs, a four wheel drive road skirts the canyon rim. At the lower end of the segment, a jeep trail accesses the river upstream of Deadman Canyon.

Segment 3 is accessible by five roads. The Sanchez Road is the principle means of access in the segment. From the Sanchez Road, a road branches north and exits the study area west of Spring Canyon. Another road branches south to the Dorothy B Mine. Finally, the Melendrez Farm and Deadman Canyon Roads provide access to the south side of the river in this segment.

There are five utilities in the study area. The following provides details.

Segment 1: There are four utilities in this segment. They include a 230 kV powerline, a 7.2 kV powerline to the Subla Ranch, a 7.2 kV powerline to the Menges Ranch, and a telephone line to the Menges Ranch.

Segment 2: There are no utilities in this segment of the study area.

Segment 3: There is one utility in this segment, the City of Safford's Bonita Creek water system

pipeline.

D. RECREATION

Fishing, tubing, hiking, picnicking, floatboating (rafting, kayaking, and canoeing), wildlife viewing, bathing (hot spring), and sandrail (recreational vehicle) driving occur seasonally in the study area. Combined use levels are estimated to be about 4,000 visitor use days per year.

A picnic area with two tables, grills, and trash cans is in Segment 1 at the Old Safford Bridge. The site is popular for picnicking, camping, fishing, swimming, and wildlife viewing. It is also used as a launch for float boating in the spring. A second picnic area is in Segment 3 at Spring Canyon. The site has two tables and is popular for picnicking, camping, fishing, tubing, and swimming. The site is also occasionally used by floaters.

The Bonita Creek Stone Cabin has been reconstructed and interpreted for public use at the mouth of Bonita Creek. This site offers the public an opportunity to learn about the farming and ranching history of the area. The mouth of Bonita Creek, while undeveloped, is popular for picnicking, camping, swimming, wildlife viewing, fishing, and is an access point for sandrail use in the river canyon.

The Black Hill Back Country Byway (Old Safford-Clifton Road) crosses the eastern end of the study area in Segment 1. The Byway provides back country driving opportunities for high clearance vehicles.

Gillard Hot Spring is about 1.5 miles upstream of the confluence with the San Francisco River, in Segment 2. Hot water, about 180 degrees F., emerges from the beach at the river's edge. Though undeveloped, the hot spring is occasionally used for bathing.

Float boating is becoming increasingly popular. Although five commercial companies have

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

permits to operate on the Gila, private use is more common. People using rafts, kayaks, and canoes regularly float the 23 mile stretch between the Old Safford Bridge and Bonita Creek/Dry Canyon during the spring snow melt and the summer monsoon season.

In the summer and fall months, at low water (about 200 cfs), local residents drive sandrails in the river canyon. Sandrails provide access for sightseeing, fishing, picnicking, and recreation driving. Typically, sandrails are driven over the sand and cobbles of the river bottom, crossing the Gila numerous times in the shallow waters above and below riffles. Several points provide access to the river canyon including, mouth of Bonita Creek, Eagle Creek, San Francisco River, and Old Safford Bridge. Three and four wheeled all terrain vehicles are commonly used at the mouth of Bonita Creek, Gillard Hot Spring, and the Old Safford Bridge.

The draft Gila Box Interdisciplinary Activity Plan identifies the following recreation developments in the study area:

Two 10 unit campgrounds: one at Owl Canyon on the north side of the river in Segment 1; and one on the bench on the north side of the river near the Dorothy B mining claim group in Segment 3.

Three picnic areas: one at the mouth of Bonita Creek in Segment 3; one at Deadman Canyon on the south side of the river in Segment 3; and one at Dry Canyon on the north side of the river in Segment 3. In addition to these three new sites, BLM will continue to operate the Old Safford Bridge Picnic Area in Segment 1 and the Spring Canyon Picnic Area in Segment 3.

Two float boating access facilities: one at the Old Safford Bridge Picnic Area in Segment 1; and one at the proposed Dry Canyon Picnic Area in Segment 3. The facilities will include stabilized routes to the river to load and unload equipment.

Gila Box Rim Trail: a nonmotorized trail for hiking, horse-back riding, and mountain biking in Segments 2 and 3.

Orange Cliff Overlook: upgrade the existing road as a scenic loop drive; develop an overlook with trailhead connecting to the Gila Box Rim Trail; and install tables and benches. The overlook is on the north side of the river in Segment 2.

Parking area for access to the Gila Box: Gila River one access point and parking area at the end of the four wheel drive road upstream of Deadman Canyon on the south side of the river in Segment 2.

Gillard Hot Springs Tubs: provide a parking area on the knoll outside the study area. Channel the hot water into pools for year long bathing. Access to the pools and river from the parking area will be by foot from the parking area. A restroom and other minor convenience facilities will be constructed, as well. This facility is proposed in Segment 2.

In response to anticipated recreation developments, visitor use is projected to increase from the current level of 4,000 recreation visitor days in 1993 to 10,000 visitor days in 2013.

Traffic on the primitive roads in the Gila Box area is currently light. Local ranchers, hunters, recreationists, sandrillers and an occasional miner constitute the majority of use.

Designation of the area as a riparian national conservation area may lead to increased visitation and traffic increases. Management actions identified in the draft Gila Box Interdisciplinary Activity Plan will improve the transportation system in the area to accommodate increased traffic through road construction, improvements, and maintenance.

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

E. WILDLIFE

The Gila River provides outstandingly remarkable habitat values for threatened, endangered and candidate wildlife species. The river, riparian vegetation and upland areas provides habitat used by three Federally endangered species (Bald Eagle (Haliaeetus leucocephalus), Peregrine Falcon (Falco peregrinus), and the reintroduced Razorback Sucker (Xyrauchen texanus)); one proposed endangered species southwestern willow flycatcher (Empidonax traillii extimus); and 14 federal candidate species (California leaf-nosed bat (Macrotus californicus) southwest cave myotis (Myotis velifer), greater western mastiff-bat (Eumops perotis californicus), goshawk (Accipiter gentilis), cactus ferruginous pygmy owl (Glaucidium brasilianum cactorum), northern gray hawk (Buteo nitidus maximus), narrow-headed garter snake (Thamnophis rufipunctatus) Arizona toad (Bufo microscaphus microscaphus), and lowland leopard frog (Rana yavapaiensis), roundtail chub (Gila robusta), Sonora sucker (Catostomus insignis), desert sucker (Catostomus clarki) and Maricopa tiger beetle (Cicindela oregona maricopa)). State listed species include the above plus 6 other species.

The bald eagle (Haliaeetus leucocephalus), a federal endangered species, winters along these segments of the Gila river. Threats to the Arizona population include lead poisoning, loss of winter roosts, shooting, and loss of riparian and aquatic habitat essential for their existence.

The federal and state endangered peregrine falcon (Falco peregrinus), nest in, migrate through and/or winter in Arizona. Populations have increased in Arizona since at least 1980 and there appears to be few threats to its remote, cliff-face habitat. This species has been observed in the Gila Box.

The federal endangered razorback sucker (Xyrauchen texanus) has been reintroduced in the Gila Box area. These fish are threatened by

habitat alteration and predatory exotic fish species.

The lowland leopard frog (Rana yavapaiensis), a state and federal candidate species, is known to occur in this stream. This species is found in southcentral, central, westcentral and extreme northwestern Arizona generally at elevations below 3,000 feet. It is dependent on permanent water and is threatened by habitat destruction, human disturbance of aquatic habitat, and the introduction of predaceous fishes and bullfrogs.

The common blackhawk (Buteogallus anthracinus), is a state candidate species that nests along perennial streams with mature riparian deciduous forests in the southern half of Arizona. Loss of riparian habitat and alteration of stream flow are the primary threats to this species continued existence.

The Gila Box also provides excellent habitat for a wide variety of native wildlife. Bears (Euarctos americanus), cougars (Felis concolor), bobcat (Lynx rufus), mule deer (Odocoileus hemionus), javelina (Pecari talacu), neotropical migratory songbirds, a variety of raptors, native fish, as well as many other species are dependent on riparian, aquatic or upland habitat in the study area.

A growing herd of Rocky Mountain bighorn sheep (Ovis canadensis biglovi) are present in the study area at the southernmost point of their distribution in North America. The Bighorn Sheep Strategic Plan identifies the herd potential as 200 animals for the combined Gila River, Bonita Creek, San Francisco River and Eagle Creek area. The population is well on its way as recent counts by Arizona Game and Fish Department indicate the current numbers at about 120.

The mosaic of habitats are used by mule deer, javelina, mountain lion, Gambels quail (Lophortyx gambelli), mourning dove (Zenaidura macroura), and white-winged dove (Zenaida asiatica). Variable numbers of waterfowl use the

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

Gila River as a sanctuary from hunters during the winter months; venturing into the farm fields during the night to feed.

The riparian vegetation is used by a large number of resident and neotropical migratory birds. Some of these species are federally or state-listed while others, such as cardinals (Cardinalis cardinalis) or hooded orioles (Icterus cucullatus) are still relatively common in Southeastern Arizona. Management that results in increasing the amount of vegetation will benefit most species. A small number of beaver (Castor canadensis) are found on the river; however, the few cottonwood and willow trees seem to be the factor limiting the population.

Five species of native fish and seven species of non-native fish are found in these segments of the Gila River. Native species include longfin dace (Agoele chrysogaster), speckled dace (Rhinichthys osculus), desert sucker (Catostomus clarki), Sonora sucker (Catostomus insignis), and the federal listed endangered razorback sucker (Xyrauchen texanus). The status of the razorback sucker population in this area is questionable at this time. However, these segments of the Gila River Box are within the area designated as critical habitat for the razorback sucker by the U.S. Fish and Wildlife Service.

The recovery plan for the woundfin minnow (Plagopterus argentissimus), a federally listed endangered species, identifies this reach of the Gila River as a preferred reintroduction site. Dr. W.L. Minckley, an authority on southwest fish, considers this reach of the Gila as the best, and only, area where several endangered fish may have a chance for long term survival in the wild.

Actions that might affect the nationally and regionally significant wildlife and fishes are largely precluded by the protection afforded the species and their habitat through the Endangered Species Act, Clean Water Act, national policies on wetland protection, and the

Bureau of Land Management policies on protection and enhancement of riparian areas. The Gila Box Riparian National Conservation Area legislation added additional protective layers to the riverine and riparian habitats.

F. VEGETATION

Approximately 550 acres of riparian vegetation communities found along the twenty-six miles of this river provide essential or critical habitat for these species and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions. These communities include mesquite bosques, cottonwood/willow, mixed broadleaf, and riparian scrub, that are an example of habitat types that have been significantly diminished and degraded in historic times. The riparian area vegetation community is currently dominated by mesquite associations.

Mesquite Bosque: Large mesquite, with a closed canopy 30 to 45 feet high, characterized this community. A shrub layer may or may not be present. The major grasses are bermuda grass and red brome.

Mixed Broadleaf: This community is represented by small scattered clumps in this area. It is characterized by Fremont cottonwood, Arizona walnut, Arizona sycamore, velvet ash and Goodding willow.

Cottonwood-willow riparian: The Gila River has small strips of this community which is characterized by a gallery forest of Fremont cottonwood and Goodding willow. This community is sometimes intermixed with mesquite and tamarisk as well as shrubs, grasses and forbs. The primary grass species associated with it are bermuda grass and bull rush.

Riparian Scrub: This type is usually composed of a dense stand of narrowleaf shrubs. Dominant species are usually seepwillow, desert willow or burro brush. Other species could

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

include mesquite, catclaw and tamarisk.

Major species found in the Gila Box include mesquite (Prosopis juliflora), Fremont cottonwood (Populus fremonti), Goodding willow (Salix gooddingii), Arizona walnut (Juglans major), velvet ash (Fraxinus velutina), seep willow (Baccharis glutinosa), burro brush (Hymenoclea monogyra), and netleaf hackberry (Celtis reticulata). On a regional basis only a small fraction of the original riparian areas remain intact. Bureau of Land Management of the Gila Box is focused on the riparian area and associated values and described in detail in the draft Gila Box Riparian National Conservation Area plan.

Three major upland vegetation types exist in the Gila Box area-- grassland, mountain shrub and desert shrub. As measured by the Bureau of Land Management's ecological site inventory, the majority of the upland vegetation communities within the boundaries of the riparian national conservation area are in good to excellent ecological condition.

G. CULTURAL RESOURCES

Cultural resources found in the Gila Box area include at least eleven historic and fourteen prehistoric sites. Undoubtedly many more exist and have not yet been discovered and recorded. Two historic and two prehistoric sites qualify for listing on the National Register of Historic Places. All alternatives of the Gila Box Riparian National Conservation Area include inventories, site studies and an ethnoecological investigation of this area.

Increased awareness of the existence of the Gila River in the region and improved access will lead to increased visitor use of this area. The protection of archaeological resources becomes more complicated as more and more people use the area.

H. WATER RESOURCES

Bureau of Land Management inventories divide the river into four distinct hydrologic sections. These sections are all perennial in nature. Each segment exhibits resources and values that are modified by the flow regime and geomorphology in that particular section. The riparian and wildlife resources of the area are dependent on the natural flow regimes found in the river. Since the senior water rights are located downstream of the Gila Box surface flow seems to be assured in the river.

Seasonal fluctuations in flow follow the precipitation pattern of high flow during the winter and following summer thunderstorms and low flows during the late spring and fall. The contribution of streamflow from the San Francisco River, Eagle Creek, and Bonita Creek provide for a significantly larger flow at the downstream end of the study area of the Gila River.

U.S. Geological Survey stream gages near the head of Safford Valley have monitored flow in the Gila River since 1914. Maximum discharge during the 89 years of record was 132,000 cubic feet per second, minimum discharge was 11 cubic feet per second, and average discharge is 481 cubic feet per second.

The Safford District initiated and completed a contract with the Tree Ring Laboratory at the University of Arizona to reconstruct streamflow on the Gila River back to approximately 1650. The results of this study provide an historic perspective on the cycles and trends in streamflow in the Gila River basin upstream of Safford Valley. Discharge at the head of Safford Valley averages 315,180 acre feet per year but is highly variable ranging from 73,050 to 1,595,870 acre feet annually. Reconstructed 70-year means vary by more than 100,000 acre feet.

The shallow groundwater aquifer that supports surface flow in the Gila Box is limited to the alluvium within the canyon. In other areas such as Duncan and Safford valley large quantities of

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

groundwater are pumped for agricultural purposes. Approximately 130,000 acre feet of groundwater is pumped from both shallow and deep aquifers annually.

Surface water and shallow ground water in the Gila Box generally meet state water quality standards for designated uses. The most frequently exceeded water quality standards are turbidity and copper. Less frequent exceedences are fecal coliform, high pH, and low dissolved oxygen. Gillard Hot Springs produces an estimated 400 gallons per minute of water high in dissolved solids, including sodium and chloride.

A water quality survey of the Gila River upstream of San Carlos Reservoir was conducted by Denise Baker of the U.S. Fish and Wildlife Service in 1990. The results of this study are not yet available in a final report.

Water rights in the Gila River Basin are currently undergoing litigation in the state and federal courts. The issue of water rights is controversial and the distinction between state and federal jurisdiction is unclear.

Water is, and will continue to be used both upstream and down-stream of the study area for agricultural, industrial and domestic purposes. It is anticipated that senior, downstream water users - the farmers in the Safford Valley, San Carlos Apache Tribe, farmers in the Coolidge/Florence area, and Gila River Indian Tribe will ensure that an adequate amount of water will continue to flow through the study area to support the free flowing character and outstandingly remarkable values of the river.

Three permittees hold water rights for cattle watering in this segment. The Bureau of Land Management has applied for an instream flow water right of 439 cubic feet per second for Gila River through the State of Arizona and acquired a federal reserve water right in Title II of the Arizona Desert Wilderness Act. The amount of flow requested in the Federal Reserve water

right will be determined from the results of studies on aquatic and recreation flow requirements. These rights even if perfected are junior to nearly all other water rights in the basin. Since the whole Gila River basin is thought to be over allocated in all but the wettest years streamflow in this stream depends on the downstream points of diversion for senior water rights.

I. LIVESTOCK GRAZING

Portions of eight livestock grazing allotments are in the study area. That portion of the allotment actually in the study area varies by allotment from less than one percent to 51 percent. The actual percentage of the allotment in the study area that is grazed, however, is even lower due to the steep terrain in most allotments.

Current plans call for removal of livestock in the lower 11 miles of the study area from Camelsback downstream to the end of the study area (part of Segment 2 and Segment 3).

Livestock grazing will occur on a limited basis in the wintertime in 15 miles of riparian area from Guthrie downstream to Camel Back (Segment 1 and part of Segment 2). To implement this plan, 12 miles of riparian pasture fence will be constructed.

The Bureau of Land Management emphasis has been on controlling livestock use in the river bottom. Allotment management plans have been developed and have changed the traditional, unrestricted yearlong use to managed, seasonal use through grazing systems and riparian pastures in many allotments. Water sources have been developed on the uplands to reduce dependency on water in the river. Currently, six of the nine allotments are under a grazing system.

The allotment details are as follows.

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Name	Total Acres	Total Study Area Acres	Total Animal Units	Total Study Area Animal Units
Bonita Creek	20,793	1,065	287	11
Bullgap	9,036	1,140	104	13
Morenci	25,683	1,265	302	15
Smuggler Peak	14,245	379	104	3
Zorilla	14,941	1,920	197	25
Gila	2,822	1,430	16	8
Twin C	10,981	760	152	10
County Line	9,030	10	140	<1

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CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Gila Box: Gila River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The life of the project and long term impacts is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans complying with the National Environmental Policy Act would be developed for any Congressionally designated Wild and Scenic River.
10. Any restrictions on mineral development would be subject to valid existing rights.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The Safford District Resource Management Plan identified fish, wildlife, hydrologic, recreation, geologic, scenic, historic and cultural resources as outstandingly remarkable in determining that The Gila Box: Gila River is eligible for consideration as a Wild and Scenic river.

Under the recommended alternative the Gila Box: Gila Box: Gila River study area would be recommended suitable for designation and its outstandingly remarkable values would receive additional special legislative protection.

Impacts on outstandingly remarkable scenic and geologic values

Restricting patents to the minerals estate would protect the outstandingly remarkable scenic and geologic values by retaining the surface lands under federal management on 1,410 acres

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable scenic and geological values that are associated with the waterway.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, the scenic and geologic values of the area are protected by the limiting of rights-of-ways to existing corridors, closure of the 23 of the 26.6 miles of the study area to future mineral entry, and careful siting of recreational developments in the upland areas.

• Conclusion

Implementation of the recommended alternative would result in beneficial impacts for the outstandingly remarkable scenic and geologic values. The values would be protected by specific wild and scenic river management provisions and would have long-term legislative protection from the Wild and Scenic Rivers Act.

The outstandingly remarkable values also would be protected by management actions associated with the Gila Box Riparian National Conservation Area.

Impacts on outstandingly remarkable recreation values

Fishing, tubing, hiking, picnicking, floatboating (rafting, kayaking, and canoeing), wildlife viewing, bathing (hot spring), and sandrail driving occur seasonally in the study area. Combined use levels are estimated to be about 4,000 visitor use days per year. In response to anticipated recreation developments, visitor use is projected to increase from the current level of 4,000 recreation visitor days in 1993 to 10,000 visitor days in 2013.

Restricting mining claims only to minerals

patents would protect the outstandingly remarkable recreation values by retaining the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable recreation values that are associated with the waterway.

Additional protection for the outstandingly remarkable recreation values would be supplied by the ongoing management activities described in Chapter II.

• Conclusion

Implementation of the recommended alternative would result in beneficial impacts for the outstandingly remarkable recreation values. The values would be protected by specific wild and scenic river management provisions and would have long term legislative protection from the Wild and Scenic Rivers Act.

The outstandingly remarkable recreation values also would be protected by management actions associated with the Gila Box Riparian National Conservation Area.

Impacts on the Outstandingly Remarkable Fish population and Habitat.

Five species of native fish and seven species of non-native fish are found in these segments of the Gila Box: Gila River. All three suitable segments of the Gila River are included in a reach of the Gila River designated as critical habitat for the endangered razorback sucker by the U.S. Fish and Wildlife Service in March 1993. These segments are also included in the recovery plan for the endangered woundfin minnow.

Restricting patents to the minerals estate would protect the outstandingly remarkable recreation fish population and habitat values by retaining

GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable fish population and habitat values that are associated with the waterway.

Additional protection for the outstandingly remarkable fish population and fish habitat values would be supplied by the ongoing management activities described in Chapter II. For example, aquatic habitat suitable for native fish is created and maintained through the interaction of hydrologic forces, soil, riparian vegetation, and geomorphologic processes. The management actions in the draft Gila Box Plan that protect stream flow regimes, maintain or improve water quality, stabilize the stream channel and improve riparian vegetation will maintain or improve aquatic habitat.

Implementation of the recommended alternative and the draft Gila Box Plan includes management actions that exclude grazing from about 11 miles of the riparian zone, require seasonal use in the other 15 miles, and develop facilities such as water sources and fences in the uplands. Roads will be located in stable areas and total mileage reduced from 26.6 miles to 1.2 miles. Campgrounds and trailheads will be located in upland areas away from the riparian zone. Boat launching sites will be located in stable areas. Water quantity will be protected through the acquisition of instream flow water rights.

These actions are expected to result in maintenance and improvement of aquatic habitat that will benefit native fish. Native fish in the southwest are known to suffer negative impacts from the introduction of non-native fish that displace or prey on native species. These invader species are present in all three segments of the Gila River. No management actions are identified that will reduce these

impacts and they will remain very high.

- Conclusion

Implementation of the recommended alternative would have minor beneficial impacts on the outstandingly remarkable fish populations by improving aquatic habitat and water quality. It will prevent habitat degradation by protecting the hydrologic, soil and vegetation resources that are factors in its creation and maintenance.

Impacts on outstandingly remarkable wildlife populations and wildlife habitat.

The Gila Box provides outstandingly remarkable habitat for federal and state threatened, endangered and candidate species as well as more common native wildlife. The combination of perennial water, riparian vegetation and adjacent upland habitats forms a rich habitat matrix utilized by many native mammals, birds, amphibians, native fish and reptiles.

The river, riparian vegetation and upland areas, provide habitat used by three Federally endangered species, two threatened species and 14 candidate species. State listed species include these species and six others.

Bear, cougar, Rocky Mountain bighorn sheep, deer, neotropical migratory songbirds, a variety of raptors, native fish and many other species are relatively common along these river segments. Variable numbers of waterfowl use the Gila River as a sanctuary from hunters during the winter months, venturing into the farm fields during the night to feed. A small number of beaver are found on the river; however, the few cottonwood and willow trees seem to be the factor limiting the population.

Restricting patents to the mineral estate would protect the outstandingly remarkable recreation wildlife population and habitat values by retaining the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

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Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable wildlife population and habitat values that are associated with the waterway.

Additional protection for the outstandingly remarkable wildlife population and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, wildlife in the study area are affected by the quantity and quality of habitat. Wildlife management that will reduce impacts, improve habitat, and protect priority species, including threatened and endangered species and critical habitat include the following actions.

Habitat impacts from grazing will be reduced through a combination of excluding 11 miles of riparian area and requiring seasonal grazing systems designed to reduce impacts on the riparian areas in 15 miles of the river corridor. The total mileage of road in the riparian area will be reduced by 95 percent from 26.6 miles to 1.2 miles.

Upland habitat quality will be maintained and/or improved by more intensive grazing management and prescribed natural fire. Recreation developments will be located and designed to prevent conflicts with wildlife habitat.

Priority species including threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area. Wildlife are also impacted by direct human disturbance. Actions that increase the number of visitors to the area will likely increase the disturbance impact. Improved access roads, boat launching facilities, picnic and campground developments, and regional recognition of the area as a conservation area and wild and scenic river will increase visitation and disturbance impacts.

Reducing total riparian area road mileage from

26.6 to 1.2, and careful siting of recreation developments in upland areas will reduce the impacts of these increases.

• Conclusion

The recommended alternative would have high beneficial impacts on wildlife habitat by controlling uses such as grazing, wood cutting, and motorized travel that have historically caused habitat degradation.

Minor adverse impacts are expected from additional visitation of the area mitigated by visitor education and management activities.

Impacts on cultural and historic resources

Cultural resources found in The Gila Box area include at least 11 historic and 14 prehistoric sites. Undoubtedly many more exist and have not yet been discovered and recorded. Two historic and two prehistoric sites qualify for listing on the National Register of Historic Places. All alternatives of the Gila Box Riparian National Conservation Area include inventories, site studies and an ethnoecological investigation of this area.

Increased awareness of the existence of the Gila River in the region and improved access will lead to increased visitor use of this area. The protection of archaeological resources becomes more complicated as more and more people use the area.

All proposed activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed.

If sites are evaluated as eligible for the National Register of Historic Places on consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be

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mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

Reducing total road mileage from 26.6 to 1.2 miles in riparian areas and curtailing grazing will benefit historic and cultural resources. Increased visitor use will lead to increased incidents of vandalism and have negative impacts. Increases in visitor management activities such as education and interpretation of cultural sites as well as regular patrols will mitigate some of these negative impacts. Interpretation and excavations of sites in the Gila River will lead to data recovery from sites susceptible to destruction.

• Conclusion

Implementation of the recommended alternative and draft Gila Box Plan will have high beneficial impacts on cultural resources by better defining the resource through inventories and studies, stabilizing and protecting known sites and interpreting sites before they are degraded. Increased visitor use of the area and the associated vandalism is expected to have minor adverse impacts.

Impacts on outstandingly remarkable hydrologic values

Bureau of Land Management inventories divide the river into four distinct hydrologic sections. These sections are all perennial in nature. Seasonal fluctuations in flow follow the precipitation pattern of high flow during the winter and following summer thunderstorms and low flows during the late spring and fall. The contribution of stream flow from the San Francisco River, Eagle Creek, and Bonita Creek provide for a significantly larger flow at the

downstream end of the study area of the Gila River.

U.S. Geological Survey stream gages near the head of Safford Valley have monitored flow in the Gila River since 1914. Maximum discharge during the 89 years of record was 132,000 cubic feet per second, minimum discharge was 11 cubic feet per second, and average discharge is 481 cubic feet per second.

Approximately 130,000 acre feet of groundwater is pumped from both shallow and deep aquifers annually for domestic, agricultural and mining purposes.

Surface water and shallow ground water in the Gila Box generally meet state water quality standards for designated uses. The most frequently exceeded water quality standards are turbidity and copper. Less frequent excesses are fecal coliform, high pH, and low dissolved oxygen. Gillard Hot Springs produces an estimated 400 gallons per minute of water high in dissolved solids, including sodium and chloride.

Three permittees hold water rights for cattle watering in this segment. Other senior water rights both state and federal reserve are located downstream of the study area. The Bureau of Land Management has applied for an instream flow water right of 439 cubic feet per second for Gila River through the State of Arizona and acquired a federal reserved water right in Title II of the Arizona Desert Wilderness Act.

The amount of flow requested in the federal reserved water right will be determined from the results of studies on aquatic and recreation flow requirements. These rights, even if perfected, are junior to nearly all other water rights in the basin. Since the whole Gila River basin is known to be over allocated in all but the wettest years stream flow in this stream depends on the downstream points of diversion for senior water rights.

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Grazing management practices, such as excluding livestock from riparian areas, reducing the mileage of roads in the riparian area by 95 percent from 26.6 miles to 1.2 miles, locating recreational developments in stable areas will protect the quantity and quality of water. Actions taken to benefit riparian vegetation will also enhance channel stability and reduce sedimentation.

Water quantity will be protected through the acquisition of instream flow water rights from the state of Arizona and the quantification of the federal reserved water right granted in the Arizona Desert Wilderness Act of 1990.

Water quality will be protected through monitoring for compliance with Arizona state standards. The reduction in miles of riparian roads, modifications in livestock management, control of off highway vehicles, and careful siting of recreation developments will enhance and/or protect water quality.

Implementation of the recommended alternative will have minor to moderate beneficial impacts on water resources and result in slight improvements in water quality. Stream flow quantities will be determined through state and federal water rights litigation. The most likely scenario is that senior water rights will be located downstream assuring continued flow in the Gila Box.

• Conclusion

Growth in the number of visitor days from publicity about the wild and scenic river designation and the riparian national conservation area will increase the potential for the impairment of the outstandingly remarkable values. However, implementation of the recommended alternative and draft Gila Box Plan will compensate for this and will benefit the outstandingly remarkable values by providing needed protection.

Impacts on riparian resources

The approximately 550 acres of riparian vegetation communities found along the twenty-six miles of this river provide essential or critical habitat for wildlife species and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions.

These communities include mesquite bosques, cottonwood/willow, mixed broadleaf, and riparian scrub. The riparian area is currently dominated by mesquite associations. These communities are an example of habitat types that have been significantly diminished and degraded in historic times. On a regional basis only a small fraction of the original riparian areas remain intact.

Riparian vegetation is impacted through direct removal by large flood events, vegetation clearing, grazing, road building, recreation site developments and activities in and around these areas. It is indirectly affected by channel destabilization, soil compaction, stream flow modification and in some cases water quality degradation.

Uncontrolled grazing, woodcutting, and homesteading had negative impacts on the Gila Box riparian vegetation in historic times. These impacts have been reduced over time with the abandonment of the homesteads and increased management focus on reducing direct impacts to the riparian areas.

Management actions addressing riparian vegetation are designed to meet Bureau objectives of reaching functioning condition and advanced ecological status on 75 percent of the riparian areas under its management by 1997. These actions include the following. No wood cutting is allowed in the approximately 550 acres of riparian vegetation in the study area.

Livestock will be managed through a combination of exclusion from 11 miles of the riparian area and seasonal use grazing

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strategies in the remaining 15 miles. This course of action will reduce grazing impacts, vegetation removal and soil compaction, and contribute to improved riparian vegetation community conditions by increasing species diversity, increasing vegetation density, enhancing age class structure and allowing colonization of barren areas.

Major recreation developments such as campgrounds and trailheads will be located in upland areas away from the riparian zone. Boat launching sites will be located in hydrologically stable areas. Trails will be built and maintained in ways that will minimize impacts to vegetation and soil stability.

Off highway vehicle use would be limited to designated roads resulting a 95 percent reduction in sandrail use of the riparian area. Rerouting the remaining roads and improving maintenance procedures will reduce erosion and sedimentation.

Major floods will continue to impact riparian vegetation through vegetation removal. These impacts, however, cannot be considered adverse when they also contribute to the cycle of erosion and deposition on the river that is responsible for renewing many riparian communities.

Impacts of the recommended alternative on riparian vegetation is expected to be beneficial through the control of grazing. Lower beneficial impacts will be achieved through off-highway vehicle limitations reducing sandrail use. There will be minor adverse impacts due to increased visitation.

• Conclusion

Implementation of the recommended alternative would have no adverse impacts on riparian vegetation.

Impact on Minerals Development

The portion of this river study area within the Gila Box riparian national conservation area was closed to mineral entry by the Arizona desert Wilderness Act of 1990. The three-mile long upstream portion of segment 1 outside the conservation area will remain open to mineral entry with a no surface occupancy stipulation and no mineral sales (sand and gravel) allowed. These actions were identified for riparian areas in the Safford District Resource Management Plan.

Impacts to mining include withdrawal from mineral entry of about 23 miles of the 26 miles of river in the study area and validity exams on the existing Dorothy B block of 23 claims. All claims found to be invalid will be withdrawn.

• Conclusion

There will be no impacts on mineral development from implementation of the recommended alternative.

Impacts on Upland Vegetation

Three major upland vegetation types exist in the Gila Box area -- grassland, mountain shrub and desert shrub. As measured by the Bureau of Land Management's ecological site inventory, the majority of the upland vegetation communities within the boundaries of the riparian national conservation area are in good to excellent ecological condition.

Upland vegetation management will maintain the majority of the upland areas in good to excellent ecological condition as measured by the Bureau's ecological site inventory. Impacts from livestock grazing will be managed through intensive management and rest rotation grazing strategies. A prescribed natural fire plan will allow fire to play its natural role in maintaining the vegetation communities.

Roads, recreation developments and range

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improvements will continue to have intense impacts on limited areas.

• Conclusion

Implementation of the recommended alternative is expected to have minor to moderate beneficial benefits on the ecological condition and productivity of upland vegetation communities.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Gila Box river study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Safford District Resource Management Plan (1992) and the Gila Box Riparian National Conservation Area Management Plan.

The cumulative impacts to uses and values associated with implementation of the recommended alternative would be negligible due to the regulations and management constraints on these areas found in the Safford District Resource Management Plan and the draft Gila Box Interdisciplinary Activity Plan.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

The study area was withdrawn from mineral entry by the Arizona Desert Wilderness Act of 1990.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative will protect values and resources found in the area due to the restrictions on activities and protective strategies identified in the recommended alternative, the Gila Box National Interdisciplinary Activity Plan, and the Safford District Resource Management Plan.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The Safford District Resource Management Plan identified fish, wildlife, hydrologic, recreation, geologic, scenic, historic and cultural resources as outstandingly remarkable. In determining that The Gila Box area of the Gila River is eligible for consideration as a Wild and Scenic river.

Under the all suitable alternative the Gila Box: Gila River study area would be recommended suitable for designation and its outstandingly remarkable values would receive additional special legislative protection.

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Impacts on outstandingly remarkable scenic and geologic values

Restricting patents to the minerals estate would protect the outstandingly remarkable scenic and geologic values by retaining the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable scenic and geological values that are associated with the waterway.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, the scenic and geologic values of the area are protected by the limiting of rights-of-ways to existing corridors, closure of the 23 of the 26.6 miles of the study area to future mineral entry, and careful siting of recreational developments in the upland areas.

• Conclusion

Implementation of the all suitable alternative would result in beneficial impacts for the outstandingly remarkable scenic and geologic values. The values would be protected by specific wild and scenic river management provisions and would have long term legislative protection from the Wild and Scenic Rivers Act.

The outstandingly remarkable values also would be protected by management actions associated with the Gila Box Riparian National Conservation Area.

Impacts on outstandingly remarkable recreation values

Fishing, tubing, hiking, picnicking, floatboating (rafting, kayaking, and canoeing), wildlife viewing, bathing (hot spring), and sandrail driving occur seasonally in the study area. Combined use levels are estimated to be about

4,000 visitor use days per year. In response to anticipated recreation developments, visitor use is projected to increase from the current level of 4,000 recreation visitor days in 1993 to 10,000 visitor days in 2013.

Restricting patents to the mineral estate would protect the outstandingly remarkable recreation values by retaining the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable recreation values that are associated with the waterway.

Additional protection for the outstandingly remarkable recreation values would be supplied by the ongoing management activities described in Chapter II.

• Conclusion

Implementation of the all suitable alternative would result in beneficial impacts for the outstandingly remarkable recreation values. The values would be protected by specific wild and scenic river management provisions and would have long-term legislative protection from the Wild and Scenic Rivers Act.

The outstandingly remarkable recreation values also would be protected by management actions associated with the Gila Box Riparian National Conservation Area.

Impacts on the Outstandingly Remarkable Fish population and Habitat.

Five species of native fish and seven species of non-native fish are found in these segments of the Gila Box: Gila River. All three eligible segments of the Gila Box: Gila River are included in a reach of the Gila River designated as critical habitat for the endangered razorback sucker by the U.S. Fish and Wildlife Service in March 1993. These segments are also included

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in the recovery plan for the endangered roundtail darters.

Restricting patents to the mineral estate would protect the outstandingly remarkable recreation fish population and habitat values by retaining the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable fish population and habitat values that are associated with the waterway.

Additional protection for the outstandingly remarkable fish population and habitat values would be supplied by the ongoing management activities described in Chapter II. For example, aquatic habitat suitable for native fish is created and maintained through the interaction of hydrologic forces, soil, riparian vegetation, and geomorphologic processes. The management actions in the draft Gila Box Plan that protect stream flow regimes, maintain or improve water quality, stabilize the stream channel and improve riparian vegetation will maintain or improve aquatic habitat.

Implementation of the all suitable alternative and the draft Gila Box Plan includes management actions that exclude grazing from about 11 miles of the riparian zone, require seasonal use in the other 15 miles, and develop facilities such as water sources and fences in the uplands. Roads will be located in stable areas and total mileage reduced from 26.6 miles to 1.2 miles. Campgrounds and trailheads will be located in upland areas away from the riparian zone. Boat launching sites will be located in stable areas. Water quantity will be protected through the acquisition of instream flow water rights.

These actions are expected to result in maintenance and improvement of aquatic habitat that will benefit native fish.

Native fish in the southwest are known to suffer negative impacts from the introduction of non-native fish that displace or prey on native species. These invader species are present in all three segments of the Gila Box: Gila River. No management actions are identified that will reduce these impacts and they will remain very high.

• Conclusion

Implementation of the all suitable alternative would have low beneficial impacts on the outstandingly remarkable fish populations by improving aquatic habitat and water quality. It would prevent habitat degradation by protecting the hydrologic, soil and vegetation resources that are factors in its creation and maintenance.

Impacts on outstandingly remarkable wildlife populations and wildlife habitat.

The Gila Box provides outstandingly remarkable habitat for federal and state threatened, endangered and candidate species as well as more common native wildlife. The combination of perennial water, riparian vegetation and adjacent upland habitats forms a rich habitat matrix utilized by many native mammals, birds, amphibians, native fish and reptiles.

The river, riparian vegetation and upland areas, provide habitat used by three federally endangered species, two threatened species and 14 candidate species. State listed species include these species plus six others.

Bear, cougar, Rocky Mountain bighorn sheep, deer, neotropical migratory songbirds, a variety of raptors, native fish and many other species are relatively common along these river segments. Variable numbers of waterfowl use the Gila River as a sanctuary from hunters during the winter months, venturing into the farm fields during the night to feed. A small number of beaver are found on the river; however, the few cottonwood and willow trees seem to be the factor limiting the population.

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Restricting patents to the mineral estate would protect the outstandingly remarkable recreation wildlife population and habitat values by retaining the surface lands under federal management on 1,410 acres outside the riparian national conservation area.

Prohibiting new flood control dams, levees, water supply dams, and major diversions would protect the outstandingly remarkable wildlife population and habitat values that are associated with the waterway.

Additional protection for the outstandingly remarkable wildlife population and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, wildlife in the study area are affected by the quantity and quality of habitat. Wildlife management that will reduce impacts, improve habitat, and protect priority species, including threatened and endangered species include the following actions.

Upland habitat quality will be maintained and/or improved by more intensive grazing management and prescribed natural fire. Recreation developments will be located and designed to prevent conflicts with wildlife habitat.

Priority species including threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area. Wildlife are also impacted by direct human disturbance. Actions that increase the number of visitors to the area will likely increase the disturbance impact. Improved access roads, boat launching facilities, picnic and campground developments, and regional recognition of the area as a conservation area and wild and scenic river will increase visitation and disturbance impacts.

Reducing total riparian area road mileage from 26.6 miles to 1.2 miles, and careful siting of recreation developments in upland areas will reduce the impacts of these increases.

• Conclusion

The all suitable alternative is expected to have high beneficial impacts on wildlife habitat by controlling uses such as grazing, woodcutting, and motorized travel that have historically caused habitat degradation.

Minor adverse impacts are expected from additional visitation of the area mitigated by visitor education and management activities.

Impacts on cultural and historic resources

Cultural resources found in The Gila Box area include at least 11 historic and 14 prehistoric sites. Undoubtedly many more exist and have not yet been discovered and recorded. Two historic and two prehistoric sites qualify for listing on the National Register of Historic Places. All alternatives of the Gila Box Riparian National Conservation Area include inventories, site studies and an ethnoecological investigation of this area.

Increased awareness of the existence of the Gila Box: Gila River in the region and improved access will lead to increased visitor use of this area. The protection of archaeological resources becomes more complicated as more and more people use the area.

All proposed activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed.

If sites are evaluated as eligible for the National Register of Historic Places in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

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Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

Reducing total road mileage from 26.6 miles to 1.2 miles in riparian areas and curfallowing grazing will benefit historic and cultural resources. Increased visitor use will lead to increased incidents of vandalism and have negative impacts. Increases in visitor management activities such as education and interpretation of cultural sites as well as regular patrols will mitigate some of these negative impacts. Interpretation and excavations of sites in the Gila Box: Gila River will lead to data recovery from sites susceptible to destruction.

• Conclusion

Implementation of the all suitable alternative and draft Gila Box Plan will have high beneficial impacts on cultural resources by better defining the resource through inventories and studies, stabilizing and protecting known sites and interpreting sites before they are degraded. Increased visitor use of the area and the associated vandalism is expected to have minor negative impacts.

Impacts on outstandingly remarkable hydrologic values

Bureau of Land Management inventories divide the river into four distinct hydrologic sections. These sections are all perennial in nature. Seasonal fluctuations in flow follow the precipitation pattern of high flow during the winter and following summer thunderstorms and low flows during the late spring and fall. The contribution of stream flow from the San Francisco River, Eagle Creek, and Bonita Creek provide for a significantly larger flow at the downstream end of the study area of the Gila River.

U.S. Geological Survey stream gages near the

head of Safford Valley have monitored flow in the Gila River since 1914. Maximum discharge during the 89 years of record was 132,000 cubic feet per second, minimum discharge was 11 cubic feet per second, and average discharge is 481 cubic feet per second.

Approximately 130,000 acre feet of groundwater is pumped from both shallow and deep aquifers annually for domestic, agricultural and mining purposes.

Surface water and shallow ground water in the Gila Box generally meet state water quality standards for designated uses. The most frequently exceeded water quality standards are turbidity and copper. Less frequent excesses are fecal coliform, high pH, and low dissolved oxygen. Gillard Hot Springs produces an estimated 400 gallons per minute of water high in dissolved solids, including sodium and chloride.

Three permittees hold water rights for cattle watering in this segment. Other senior water rights both state and federal reserve are located downstream of the study area. The Bureau of Land Management has applied for an instream flow water right of 439 cubic feet per second for Gila River through the State of Arizona and acquired a federal reserved water right in Title II of the Arizona Desert Wilderness Act.

The amount of flow requested in the federal reserved water right will be determined from the results of studies on aquatic and recreation flow requirements. These rights, even if perfected, are junior to nearly all other water rights in the basin. Since the whole Gila River basin is known to be over allocated in all but the wettest years stream flow in this stream depends on the downstream points of diversion for senior water rights.

Grazing management practices such as excluding livestock from riparian areas, reducing the mileage of roads in the riparian area by 95 percent from 26.6 miles to 1.2 miles, locating

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recreational developments in stable areas will protect the quantity and quality of water. Actions taken to benefit riparian vegetation will also enhance channel stability and reduce sedimentation.

Water quantity will be protected through the acquisition of instream flow water rights from the State of Arizona and the quantification of the federal reserve water right granted in the Arizona Desert Wilderness Act of 1990.

Water quality will be protected through monitoring for compliance with Arizona state standards. The reduction in miles of riparian roads, modifications in livestock management, control of off highway vehicles, and careful siting of recreation developments will enhance and/or protect water quality. Implementation of the all suitable alternative will have minor to moderate beneficial impacts on water resources, and result in slight improvements in water quality. Stream flow quantities will be determined through state and federal water rights litigation. The most likely scenario is that senior water rights will be located downstream assuring continued flow in the Gila Box.

• Conclusion

Growth in the number of annual visitor days from publicity about the wild and scenic river designation and the riparian national conservation area will increase the potential for the impairment of the outstandingly remarkable values. However, implementation of the all suitable alternative and draft Gila Box Plan will compensate for this and will benefit the outstandingly remarkable values by providing needed protection.

Impacts on riparian resources

The approximately 550 acres of riparian vegetation communities found along the twenty-

six miles of this river provide essential or critical habitat for wildlife species and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions.

These communities include mesquite bosques, cottonwood/willow, mixed broadleaf, and riparian scrub. The riparian area is currently dominated by mesquite associations. These communities are an example of habitat types that have been significantly diminished and degraded in historic times. On a regional basis only a small fraction of the original riparian areas remain intact.

Riparian vegetation is impacted through direct removal by large flood events, vegetation clearing, grazing, road building, recreation site developments and activities in and around these areas. It is indirectly affected by channel destabilization, soil compaction, stream flow modification and in some cases water quality degradation. Uncontrolled grazing, woodcutting, and homesteading had negative impacts on the Gila Box riparian vegetation in historic times. These impacts have been reduced over time with the abandonment of the homesteads and increased management focus on reducing direct impacts to the riparian areas.

Management actions addressing riparian vegetation are designed to meet Bureau objectives of reaching functioning condition and advanced ecological status on 75 percent of the riparian areas under its management by 1997. These actions include the following.

No woodcutting is allowed in the approximately 550 acres of riparian vegetation found in the study area.

Livestock will be managed through a combination of exclusion from 11 miles of the riparian area and seasonal use grazing strategies in the remaining 15 miles. This course of action will reduce grazing impacts, vegetation removal and soil compaction, and contribute to improved riparian vegetation

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community conditions by increasing species diversity, increasing vegetation density, enhancing age class structure and allowing colonization of barren areas.

Major recreation developments such as campgrounds and trailheads will be located in upland areas away from the riparian zone. Boat launching sites will be located in hydrologically stable areas. Trails will be built and maintained in ways that will minimize impacts to vegetation and soil stability.

Off highway vehicle use would be limited to designated roads resulting a 95 percent reduction in sandrail use of the riparian area. Rerouting the remaining roads and improving maintenance procedures will reduce erosion and sedimentation.

Major floods will continue to impact riparian vegetation through vegetation removal. These impacts, however, cannot be considered adverse when they also contribute to the cycle of erosion and deposition on the river that is responsible for renewing many riparian communities.

Implementing the all suitable alternative would have beneficial impacts on riparian vegetation due to actions to control grazing. Minor beneficial impacts will be achieved through off highway vehicle limitations reducing sandrail use. There will be minor adverse impacts due to increased visitation.

• Conclusion

Implementation of the all suitable alternative would have no adverse impacts on riparian vegetation.

Impact on Minerals Development?

The portion of this river study area within the Gila Box Riparian National Conservation Area was closed to mineral entry by the Arizona desert Wilderness Act of 1990. The three-mile

long upstream portion of segment 1 outside the conservation area will remain open to mineral entry with a no surface occupancy stipulation and no mineral sales (sand and gravel) allowed. These actions were identified for riparian areas in the Safford District Resource Management Plan.

Impacts to mining include withdrawal from mineral entry of about 23 miles of the 26 miles of river in the study area and validity exams on the existing Dorothy B block of 23 claims. All claims found to be invalid will be withdrawn also.

• Conclusion

There will be no impacts on mineral development from implementation of the all suitable alternative .

Impacts on Upland Vegetation

Three major upland vegetation types exist in the Gila Box area-- grassland, mountain shrub and desert shrub. As measured by the Bureau of Land Management's ecological site inventory, the majority of the upland vegetation communities within the boundaries of the riparian national conservation area are in good to excellent ecological condition.

Upland vegetation management will maintain the majority of the upland areas in good to excellent ecological condition as measured by the Bureau's ecological site inventory. Impacts from livestock grazing will be managed through intensive management and rest rotation grazing strategies. A prescribed natural fire plan will allow fire to play its natural role in maintaining the vegetation communities.

Roads, recreation developments and range improvements will continue to have intense impacts on limited areas.

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- Conclusion

Implementation of the all suitable alternative is expected to have minor to moderate beneficial benefits on the ecological condition and productivity of upland vegetation communities.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

The Safford District Resource Management Plan identified fish, wildlife, hydrologic, recreation, geologic, scenic, historic and cultural resources as outstandingly remarkable in determining that The Gila Box area of the Gila River is eligible for consideration as a wild and scenic river.

Under the no action alternative the Gila Box: Gila River study area would not be recommended suitable for designation and its outstandingly remarkable values would not receive additional special legislative protection under the Wild and Scenic Rivers Act.

The outstandingly remarkable fish and wildlife values would be subject to the effects of actions allowable under the management actions of the Gila Box Management Plan.

Impacts on outstandingly remarkable scenic and geologic values

The outstandingly remarkable scenic and geologic values would not have wild and scenic river long-term legislative protection.

Protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, the scenic and geologic values of the area are protected by the limiting of rights-of-ways to existing corridors, closure of the 23 of the 26.6 miles of the study area to future mineral entry, and careful siting of recreational developments in the upland areas.

- Conclusion

No adverse impacts are expected to these values from the implementation of this alternative.

Impacts on outstandingly remarkable recreation values

Fishing, tubing, hiking, picnicking, floatboating (rafting, kayaking, and canoeing), wildlife viewing, bathing (hot spring), and sandrail driving occur seasonally in the study area. Combined use levels are estimated to be about 4,000 visitor use days per year. In response to anticipated recreation developments, visitor use is projected to increase from the current level of 4,000 recreation visitor days in 1993 to 10,000 visitor days in 2013.

The outstandingly remarkable recreation values would not have wild and scenic river long-term legislative protection.

Protection for the outstandingly remarkable recreation values would be supplied by the ongoing management activities described in Chapter II.

- Conclusion

The no action alternative will have high beneficial impacts to all recreation uses of the area except off road vehicle operation by improving access to the area and constructing facilities such as campgrounds, picnic areas, trails and boat launching sites.

Off road vehicle use of the area will suffer high adverse impacts through closure of up to 95 percent of the 26.6 miles of river bottom now open to them.

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Impacts on the outstandingly remarkable fish population and habitat.

Five species of native fish and seven species of non-native fish are found in these segments of the Gila River. All three eligible segments of the Gila River are included in a reach of the Gila Box: Gila River designated critical habitat for the endangered razorback sucker by the U.S. Fish and Wildlife Service in March 1993. These segments are also included in the recovery plan for the endangered woundfin minnow. The outstandingly remarkable fish population and habitat values would not have wild and scenic river long-term legislative protection.

Protection for the outstandingly remarkable fish population and habitat values would be supplied by the ongoing management activities described in Chapter II. For example, aquatic habitat suitable for native fish is created and maintained through the interaction of hydrologic forces, soil, riparian vegetation, and geomorphologic processes. The management actions in the draft Gila Box Plan that protect stream flow regimes, maintain or improve water quality, stabilize the stream channel and improve riparian vegetation will maintain or improve aquatic habitat.

Implementation of the no action alternative and the draft Gila Box Plan includes management actions that exclude grazing from about 11 miles of the riparian zone, require seasonal use in the other 15 miles, and develop facilities such as water sources and fences in the uplands. Roads will be located in stable areas and total mileage reduced from 26.6 miles to 1.2 miles.

Campgrounds and trailheads will be located in upland areas away from the riparian zone. Boat launching sites will be located in stable areas. Water quantity will be protected through the acquisition of instream flow water rights.

These actions are expected to result in maintenance and improvement of aquatic habitat that will benefit native fish.

Native fish in the southwest are known to suffer negative impacts from the introduction of non-native fish that displace or prey on native species. These invader species are present in all three segments of the Gila Box: Gila River. No management actions are identified that will reduce these impacts and they will remain very high.

• Conclusion

Implementation of the no action alternative would have minor beneficial impacts on existing fish populations by improving aquatic habitat and water quality. It will prevent habitat degradation by protecting the hydrologic, soil and vegetation resources that are factors in its creation and maintenance.

Impacts on outstandingly remarkable wildlife populations and wildlife habitat.

The Gila Box provides outstandingly remarkable habitat for federal and state threatened, endangered and candidate species as well as more common native wildlife. The combination of perennial water, riparian vegetation and adjacent upland habitats forms a rich habitat matrix utilized by many native mammals, birds, amphibians, native fish and reptiles.

The river, riparian vegetation and upland areas, provide habitat used by 3 Federally endangered species, 2 threatened species and 14 candidate species. State listed species include these species plus 6 others.

Bear, cougar, Rocky Mountain bighorn sheep, deer, neotropical migratory songbirds, a variety of raptors, native fish and many other species are relatively common along these river segments. Variable numbers of waterfowl use the Gila River as a sanctuary from hunters during the winter months, venturing into the farm fields during the night to feed. A small number of beaver are found on the river; however, the few cottonwood and willow trees seem to be the factor limiting the population.

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The outstandingly remarkable wildlife population and habitat values would not have wild and scenic river long-term legislative protection.

Protection for the outstandingly remarkable wildlife population and habitat values would be supplied by the ongoing management activities described in Chapter II. For example, wildlife in the study area are affected by the quantity and quality of habitat. Wildlife management that will reduce impacts, improve habitat, and protect priority species, including threatened and endangered species include the following. Habitat impacts from grazing will be reduced through a combination of excluding 11 miles of riparian area and requiring seasonal grazing systems designed to reduce impacts on the riparian areas in 15 miles of the river corridor. The total mileage of road in the riparian area will be reduced by 95 percent from 26.6 miles to 1.2 miles.

Upland habitat quality will be maintained and/or improved by more intensive grazing management and prescribed natural fire. Recreation developments will be located and designed to prevent conflicts with wildlife habitat.

Priority species including threatened and endangered species will be studied, monitored, and reintroduced in appropriate habitats in the study area.

Wildlife are also impacted by direct human disturbance. Actions that increase the number of visitors to the area will likely increase the disturbance impact. Improved access roads, boat launching facilities, picnic and campground developments, and regional recognition of the area as a conservation area will increase visitation and disturbance impacts.

Reducing total riparian area road mileage from 26.6 to 1.2, and careful siting of recreation developments in upland areas will reduce the impacts of these increases.

- Conclusion

The no action alternative is expected to have high beneficial impacts on wildlife habitat by controlling uses such as grazing, wood cutting, and motorized travel that have historically caused habitat degradation. Management actions that will achieve these results are contained in the Safford District Resource Management Plan, draft Gila Box Plan and existing federal laws.

Minor adverse impacts are expected from additional visitation of the area mitigated by visitor education and management activities.

Impacts on cultural and historic resources

Cultural resources found in The Gila Box area include at least 11 historic and 14 prehistoric sites. Undoubtedly many more exist and have not yet been discovered and recorded. Two historic and two prehistoric sites qualify for listing on the National Register of Historic Places. All alternatives of the Gila Box Riparian National Conservation Area include inventories, site studies and an ethnoecological investigation of this area.

Increased awareness of the existence of the Gila Box: Gila River in the region and improved access will lead to increased visitor use of this area. The protection of archaeological resources becomes more complicated as more and more people use the area.

All proposed activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed.

If sites are evaluated as eligible for the National Register of Historic Places in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be

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mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

Protection measures, such as fencing or periodic monitoring, will be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

Reducing total road mileage from 26.6 miles to 1.2 miles in riparian areas and curtailing grazing will benefit historic and cultural resources. Increased visitor use will lead to increased incidents of vandalism and have negative impacts. Increases in visitor management activities such as education and interpretation of cultural sites as well as regular patrols will mitigate some of these negative impacts. Interpretation and excavations of sites in the Gila Box: Gila River will lead to data recovery from sites susceptible to destruction.

• Conclusion

Implementation of the no action alternative and draft Gila Box Plan will have high beneficial impacts on cultural resources by better defining the resource through inventories and studies, stabilizing and protecting known sites and interpreting sites before they are degraded. Increased visitor use of the area and the associated vandalism is expected to have minor negative impacts.

Impacts on outstandingly remarkable hydrologic values

Bureau of Land Management inventories divide the river into four distinct hydrologic sections. These sections are all perennial in nature. Seasonal fluctuations in flow follow the precipitation pattern of high flow during the winter and following summer thunderstorms and low flows during the late spring and fall. The contribution of stream flow from the San Francisco River, Eagle Creek, and Bonita Creek provide for a significantly larger flow at the

downstream end of the study area of the Gila River.

U.S. Geological Survey stream gages near the head of Safford Valley have monitored flow in the Gila River since 1914. Maximum discharge during the 89 years of record was 132,000 cubic feet per second, minimum discharge was 11 cubic feet per second, and average discharge is 481 cubic feet per second.

Approximately 130,000 acre feet of groundwater is pumped from both shallow and deep aquifers annually for domestic, agricultural and mining purposes.

Surface water and shallow ground water in the Gila Box generally meet state water quality standards for designated uses. The most frequently exceeded water quality standards are turbidity and copper. Less frequent excesses are fecal coliform, high pH, and low dissolved oxygen. Gillard Hot Springs produces an estimated 400 gallons per minute of water high in dissolved solids, including sodium and chloride.

Three permittees hold water rights for cattle watering in this segment. Other senior water rights both state and federal reserve are located downstream of the study area. The Bureau of Land Management has applied for an instream flow water right of 439 cubic feet per second for Gila River through the State of Arizona and acquired a federal reserved water right in Title II of the Arizona Desert Wilderness Act.

The amount of flow requested in the federal reserved water right will be determined from the results of studies on aquatic and recreation flow requirements. These rights, even if perfected, are junior to nearly all other water rights in the basin. Since the whole Gila River basin is known to be over allocated in all but the wettest years stream flow in this stream depends on the downstream points of diversion for senior water rights.

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Grazing management practices such as excluding livestock from riparian areas, reducing the mileage of roads in the riparian area by 95 percent from 26.6 miles to 1.2 miles, locating recreational developments in stable areas will protect the quantity and quality of water. Actions taken to benefit riparian vegetation will also enhance channel stability and reduce sedimentation.

Water quantity will be protected through the acquisition of instream flow water rights from the state and the quantification of the federal reserved water right granted in the Arizona Desert Wilderness Act of 1990.

Water quality will be protected through monitoring for compliance with Arizona state standards. The reduction in miles of riparian roads, modifications in livestock management, control of off highway vehicles, and careful siting of recreation developments will enhance and/or protect water quality.

Implementation of the no action alternative would have minor to moderate beneficial impacts on water resources and result in slight improvements in water quality. Stream flow quantities will be determined through state and federal water rights litigation. The most likely scenario is that senior water rights will be located downstream assuring continued flow in the Gila Box.

• Conclusion

Growth in the number of visitor days from publicity about the riparian national conservation area will increase the potential for the impairment of the outstandingly remarkable values. However, implementation of the no action alternative and draft Gila Box Plan will compensate for this and will benefit the outstandingly remarkable values by providing needed protection.

Impacts on riparian resources

The approximately 550 acres of riparian vegetation communities found along the 26 miles of this river provide essential or critical habitat for wildlife species and contribute to the streambank stability, water quality maintenance and other essential hydrologic functions.

These communities include mesquite bosques, cottonwood/willow, mixed broadleaf, and riparian scrub. The riparian area is currently dominated by mesquite associations. These communities are an example of habitat types that have been significantly diminished and degraded in historic times. On a regional basis only a small fraction of the original riparian areas remain intact.

Riparian vegetation is impacted through direct removal by large flood events, vegetation clearing, grazing, road building, recreation site developments and activities in and around these areas. It is indirectly affected by channel destabilization, soil compaction, stream flow modification and in some cases water quality degradation.

Uncontrolled grazing, woodcutting, and homesteading had negative impacts on the Gila Box riparian vegetation in historic times. These impacts have been reduced over time with the abandonment of the homesteads and increased management focus on reducing direct impacts to the riparian areas.

Management actions addressing riparian vegetation are designed to meet Bureau objectives of reaching functioning condition and advanced ecological status on 75 percent of the riparian areas under its management by 1997. These actions include the following specifics.

No woodcutting is allowed in the approximately 550 acres of riparian vegetation found in the study area.

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Livestock will be managed through a combination of exclusion from 11 miles of the riparian area and seasonal use grazing strategies in the remaining 15 miles. This course of action will reduce grazing impacts, vegetation removal and soil compaction, and contribute to improved riparian vegetation community conditions by increasing species diversity, increasing vegetation density, enhancing age class structure and allowing colonization of barren areas.

Major recreation developments such as campgrounds and trailheads will be located in upland areas away from the riparian zone. Boat launching sites will be located in hydrologically stable areas. Trails will be built and maintained in ways that will minimize impacts to vegetation and soil stability.

Off highway vehicle use would be limited to designated roads resulting in up to a 95 percent reduction in sandrail use of the riparian area. Rerouting the remaining roads and improving maintenance procedures will reduce erosion and sedimentation.

Major floods will continue to impact riparian vegetation through vegetation removal. These impacts, however, cannot be considered adverse when they also contribute to the cycle of erosion and deposition on the river that is responsible for renewing many riparian communities.

Impacts of the no action alternative on riparian vegetation is expected to be beneficial through the control of grazing. Lower beneficial impacts will be achieved through off highway vehicle limitations reducing sandrail use. There will be minor adverse impacts due to increased visitation.

- **Conclusion**

Implementation of the no action alternative would have no adverse impacts on riparian vegetation.

Impact on Minerals Development

The portion of this river study area within the Gila Box Riparian National Conservation Area was closed to mineral entry by the Arizona Desert Wilderness Act of 1990. The three-mile long upstream portion of segment 1 outside the conservation area will remain open to mineral entry with a no surface occupancy stipulation for leasable minerals and no mineral sales (sand and gravel) allowed. These actions were identified for riparian areas in the Safford District Resource Management Plan.

Impacts to mining include withdrawal from mineral entry of about 23 miles of the 26 miles of river in the study area and validity exams on the existing Dorothy B block of 23 claims. All claims found to be invalid will be withdrawn.

- **Conclusion**

There will be no impacts on mineral development from implementation of the no action alternative.

Impacts on Upland Vegetation

Three major upland vegetation types exist in the Gila Box area-- grassland, mountain shrub and desert shrub. As measured by the Bureau of Land Management's ecological site inventory, the majority of the upland vegetation communities within the boundaries of the riparian national conservation area are in good to excellent ecological condition.

Upland vegetation management will maintain the majority of the upland areas in good to excellent ecological condition as measured by the Bureau's ecological site inventory. Impacts from livestock grazing will be managed through intensive management and rest rotation grazing strategies. A prescribed natural fire plan will allow fire to play its natural role in maintaining the vegetation communities.

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Roads, recreation developments and range improvements will continue to have intense impacts on limited areas.

- Conclusion

Implementation of the no action alternative is expected to have minor to moderate beneficial benefits on the ecological condition and productivity of upland vegetation communities.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Gila Box: Gila River Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that the Gila Box: Gila River was eligible for further wild and scenic river study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Gila Resource Area Office, Safford, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Gila Box Wild and Scenic Study Area were held in Phoenix on April 14, 1993, Clifton April 19, 1993, and Safford, April 20, 1993. Fifty-five to 60 people attended the Phoenix meeting, and about 50 attended each meeting in Clifton and Safford.

Five interagency public informational meetings for the wild and scenic river study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land

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Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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GILA BOX: GILA RIVER WILD AND SCENIC RIVER STUDY AREA

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Bureau of Land Management, 1994

**HASSAYAMPA RIVER
WILD AND SCENIC RIVER STUDY AREA**

**PHOENIX RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

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HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Hassayampa River were identified in the Phoenix Resource Management Plan Amendment (1994) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Hassayampa River to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Hassayampa River study area is 50 miles northwest of Phoenix, primarily in Yavapai County, Arizona. Its southern end extends for two miles into Maricopa County. From north to south, the study corridor reaches from the town of Wagoner to the city of Wickenburg.

The Hassayampa River study area comprises a corridor of 29.2 riparian miles, 18.4 miles in public land. It contains 8,830 acres, 72 percent of it public land (Map HA-1). The study area is in the Phoenix Resource Area of the Phoenix District. Public land, including the Hassayampa River Canyon Wilderness Area, state and private land, and the Prescott National Forest surround the Hassayampa River study area.

North of Wickenburg, the Hassayampa River has alternating segments of surface and subsurface flow, with short perennial stretches. However, the entire river often flows during rainy periods and after big rainfall events.

The study area ranges in elevation from 1,900 to 3,400 feet. The river traverses rugged mountain

foothills in the Basin and Range Physiographic Province.

The geologic setting is primarily older granitic rock overlain by deposits of volcanic rhyolite and basalt. The basaltic rock in the Hassayampa River Canyon forms a steep scenic gorge. The streambed broadens as the river emerges from the canyon.

At the northern end of the study area, chaparral is the dominant vegetation. However, the majority of the area falls within the Arizona Upland Zone of the Sonoran Desert, characterized by a palo verde-saguaro plant community.

This reach of the Hassayampa River drains the Weaver, Bradshaw, and Wickenburg mountain ranges. The Hassayampa is a major tributary of the lower Gila River. Livestock grazing and mining are the primary land uses.

The Hassayampa River study area consists of three river segments, each with distinct characteristics and values.

Segment 1, the northern segment, is 1.8 miles long extending from Wagoner to Cherry Creek. Approximately 43 percent of the corridor is under Bureau of Land Management jurisdiction. This segment has been tentatively classified as Recreational in the Phoenix Resource Management Plan Amendment (1994).

Segment 2, the central segment from Cherry Creek to Slim Jim Creek, is 12.7 miles long and flows through 11.9 miles of public land. Federal land constitutes 94 percent of the corridor. This segment is virtually inaccessible except by trail. Most of the public land portion flows through the Hassayampa River Canyon Wilderness Area. Segment 2 has been tentatively classified as Wild in the Phoenix Resource Management Plan Amendment (1994).

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

The southern segment, segment 3, is 14.7 miles long from Slim Jim Creek to Wickenburg. Public land accounts for 38 percent of this segment. Segment 3 has been tentatively classified as Recreational in the Phoenix Resource Management Plan Amendment (1994).

The Hassayampa River was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land

Management in the Amendment to the Phoenix Resource Management Plan and Lower Gila North Management Framework Plan (1994). The river is free-flowing and has outstandingly remarkable scenic, and fish and wildlife habitat values.

The Bureau of Land Management conducted suitability determinations for each river segment during 1993.

**TABLE HR-1
STUDY AREA RIVER MILEAGE SUMMARY**

HASSAYAMPA RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	18.4	1.1	9.7	29.2
PERCENT	63.0	3.7	33.3	100.0
TOTAL ACRES	6,386.0	400.0	2,044.0	8,830.0
PERCENT	72.3	4.5	23.2	100.0

C. INTERRELATIONSHIPS

1. Bureau of Land Management

Portions of the Hassayampa River Canyon Wilderness Area are included in segment 2 and a small portion of segment 3 in the Hassayampa River study area. The Hassayampa River Canyon Wilderness was designated in part due to its scenic landscape and riparian values in its main and tributary canyons.

Preparation of a wilderness management plan to provide management guidance for the area was

initiated in 1993. A draft wilderness management plan was made available for public review in early 1994.

The Black Canyon Habitat Management Plan, approved in 1983 and revised in 1993, incorporates the study area. The plan covers approximately 406,000 acres of public land north of Phoenix in Maricopa and Yavapai counties. Undertaken in cooperation with the Arizona Game and Fish Department, it is a package of specific objectives and actions designed to optimize native plant and wildlife species diversity and to improve cover and availability of water for key wildlife species.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE HR-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE HASSAYAMPA
STUDY AREA UNDER OTHER DESIGNATIONS**

HASSAYAMPA RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Hassayampa River Canyon Wilderness	3,526	39.9

2. Other Federal Agencies

At the upper end of the Hassayampa River study area, the Prescott National Forest boundary runs parallel to and a mile east of the river for four miles below Wagoner.

Major tributaries in this area include Minnehaha, Arrastra, and Cherry creeks. The U.S. Forest Service manages much of the upper Hassayampa watershed, including the headwaters and upper reaches of the river north of the study area.

Approximately five riparian miles and 1,600 acres in segment 3 are under a Bureau of Reclamation withdrawal associated with a potential dam site at Box Canyon. The area was studied in conjunction with development of construction alternatives for the Central Arizona Project. The Bureau of Reclamation currently has no plans to construct a dam at the Hassayampa River site.

The International Boundary and Water Commission administers treaty obligations regarding water quality and deliveries to Mexico. These obligations apply to the Gila River watershed, which includes the Hassayampa River.

3. State of Arizona

Portions of the Hassayampa River study area pass through land owned and managed by the State of Arizona. The Hassayampa River Canyon Wilderness Area is surrounded by land administered by the Arizona State Land Department.

The Arizona Game and Fish Department is cooperating with the Bureau of Land Management in the implementation of the Black

Canyon Habitat Management Plan. Such comprehensive plans are provided for in the Master Memorandum of Understanding between the Arizona Game and Fish Commission and the Bureau of Land Management (1987).

Outside the study area southeast of Wickenburg, the Bureau of Land Management cooperated with the Arizona Department of Transportation in the development of an interpretive display on desert riparian ecosystems at a rest stop adjacent to U.S. Highway 60 and the Hassayampa River.

4. Local Government

The Hassayampa River study area is in portions of Yavapai and Maricopa Counties.

5. Private

The study area incorporates private land and ranches in the vicinities of Wickenburg and Wagoner. Guest ranches near Wickenburg use the area for recreational horseback riding.

Directly below Wickenburg, the southernmost perennial reach of the river is owned by The Nature Conservancy and managed as the Hassayampa River Preserve. The Preserve is a tourist destination and a center for scientific studies of the riparian ecosystem and resources.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

D. SCOPING

Scoping meetings specifically highlighting the Hassayampa River Wild and Scenic Study Area were held in Wickenburg on April 7, 1993 and Phoenix on April 14, 1993. Seventeen to 20 people attended the Wickenburg meeting and 55 to 60 attended the Phoenix meeting.

Scoping meetings specifically highlighting the Hassayampa River Wild and Scenic Study Area were held in Wickenburg on April 7, 1993 and Phoenix on April 14, 1993. Seventeen to 20 people attended the Wickenburg meeting and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of Wild and Scenic River designation on existing and potential land and water uses or resources in the general area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on use of private property
- Impacts on water rights
- Impacts on federally-listed and candidate species
- Impacts on riparian vegetation communities
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable fish and wildlife habitat
- Impacts on water quality
- Impacts on mineral development
- Impacts on construction of flood control facilities

Issues Considered But Not Addressed Further

- Impacts on use of private property

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions

would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impacts on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- Impact on water rights

A federal reserved water right was granted by the Arizona Desert Wilderness Act of 1990 for that portion of the river in the Hassayampa River Canyon Wilderness Area. Quantification of this reserved right is ongoing, and the Bureau of Land Management will submit notification to the Arizona Department of Water Resources.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

This issue will not be discussed further.

- Impacts on federally-listed and candidate species

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species. Impacts on federally-listed or candidate species will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

- Impacts on riparian vegetation communities

Impacts on riparian vegetation communities will be analyzed in the discussion of impacts on the outstandingly remarkable fish and wildlife habitat values.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Hassayampa River study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative/not suitable
All suitable alternative

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines that 29.2 riparian miles of the Hassayampa River, incorporating 8,830 acres of the Hassayampa River study area, is not suitable and does not recommend it to Congress for inclusion in the National Wild and Scenic Rivers System.

Implementation of the recommended alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

In segment 2 and a portion of segment 3, the study area incorporates 3,526 acres in the Hassayampa River Canyon Wilderness Area. The study area will be managed in accordance with the provisions of the Wilderness Act,

Bureau of Land Management Wilderness Regulations and Manual 8560, and the objectives established in the Phoenix Resource Management Plan.

Wild and Scenic River management actions

The recommended alternative determines that the study area is not suitable and does not recommend it for designation. Under this alternative, there would be no wild and scenic river management actions.

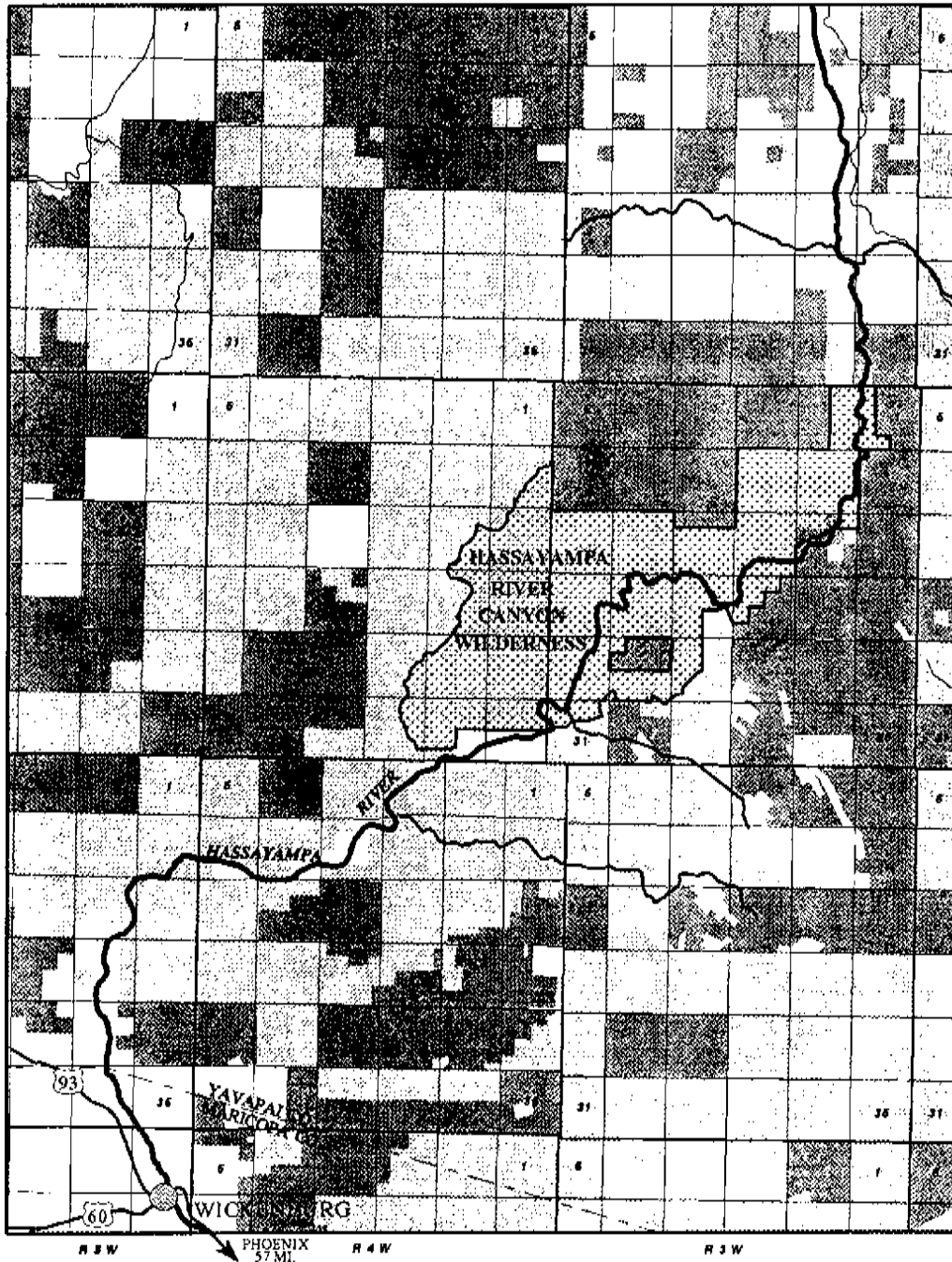
Ongoing management actions

Ongoing management actions in the Hassayampa River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Hassayampa River Canyon Wilderness, the Phoenix Resource Area Resource Management Plan, and the Black Canyon Habitat Management Plan.

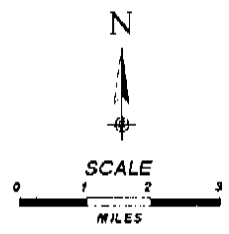
- Mineral entry, leasing, and materials disposals are prohibited on 3,526 acres in segments 2 and 3 under Hassayampa River Canyon Wilderness Area management prescriptions, subject to valid existing rights.
- 2,860 acres of public land in the study area, but outside of the wilderness area, would remain open to mineral entry, leasing, and materials disposals. Approved mining plans of operations would be required for locatable minerals operations above the level of casual use.
- New major utility corridors would be prohibited.

HASSAYAMPA RIVER

(Recommended Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
PHOENIX RESOURCE AREA
October 1994

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

- Efforts would be made to acquire up to 1,040 acres of private and state land, primarily in segments 1 and 2, on a willing seller-willing buyer basis or through exchange.
- Motorized travel is prohibited on 3,526 acres in the Hassayampa River Canyon Wilderness Area in accordance with prescriptions for the wilderness, subject to valid existing rights.
- Off-highway vehicle use would be limited to existing roads and trails on 2,860 acres outside the Hassayampa River Canyon Wilderness Area.
- In accordance with the Black Canyon Habitat Management Plan, cottonwood and willow poles would be planted along the Hassayampa River and its tributaries. Although most of the planting would occur outside the study area, up to 200 acres could be planted within it.
- The collection of fire wood for home or commercial use would be prohibited on 6,386 acres to preserve dead trees for bird, lizard, and small mammal habitat.
- Instream flows would be monitored to establish the minimum flow necessary to protect fish and wildlife habitat values.
- If instream flows necessary to protect fish and wildlife habitat are not sufficiently protected with the federal reserved water right established for the Hassayampa River Canyon Wilderness Area, an additional water right would be filed with the State of Arizona.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Hassayampa River.
- Grazing allotments would be monitored to identify conflicts between livestock grazing and outstandingly remarkable scenic, and fish and wildlife habitat values.
- On the grazing allotments in the river corridor, livestock use would be reduced to eliminate intensive use during the growing

season. Seasonal restrictions would allow use only in winter (November through February) and prohibit grazing in riparian areas during the rest of the year.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by a proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that the 29.2 riparian miles of the Hassayampa River, incorporating 8,830 acres of the Hassayampa River study area, is suitable and recommends it for inclusion by Congress in the National Wild and Scenic Rivers System. Segment 1 (1.8 riparian miles) would be recommended suitable for designation as Recreational, segment 2 (12.7 riparian miles) suitable for designation as Wild, and segment 3 (14.7 riparian miles) suitable for designation as Recreational. The entire area incorporates 18.4 riparian miles and 6,386 acres on public land.

Since 3,526 acres in segments 2 and 3 are included in the Hassayampa Canyon Wilderness

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

Area, the management of these areas would comply with the standards of the Wilderness Act and Bureau of Land Management Manual 8560.

Wild and Scenic River management actions

Wild and Scenic River designation would require the initiation of certain management actions. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following actions would occur as a result of designation. If the actions overlap ongoing management actions, the most stringent provisions would apply.

- In segment 2, 200 acres designated as Wild would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals.
- Approved plans of operations would be required for all mining related activities, above the level of casual use, which are conducted under the authority of the General Mining Law of 1872, on 2,860 acres.
- Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 6,388 acres.
- The construction of new roads would be prohibited on 200 acres designated as Wild in segment 2.
- Motorized use would be restricted, except for search and rescue or emergencies, on 200 acres designated as Wild in segment 2.
- New transmission lines, natural gas lines, and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way. New utility lines in existing rights-of-way would be constructed so as to minimize adverse impacts to the outstandingly remarkable values.
- Campgrounds, interpretive centers, or administrative headquarters in the river corridor

would be prohibited on 200 acres designated as Wild. Simple comfort and convenience facilities could be permitted. In recreational segments, moderate-sized campgrounds, interpretive centers, or administrative headquarters would be permitted.

- The construction of new dams, levees, hydropower facilities, or major types of diversions would be prohibited on 18.4 miles along the Hassayampa River.
- Instream flow would be monitored to establish the minimum flow necessary to protect the outstandingly remarkable scenic, and fish and wildlife habitat values.
- In segments designated as Wild, livestock grazing use would be limited to the extent practiced prior to designation.

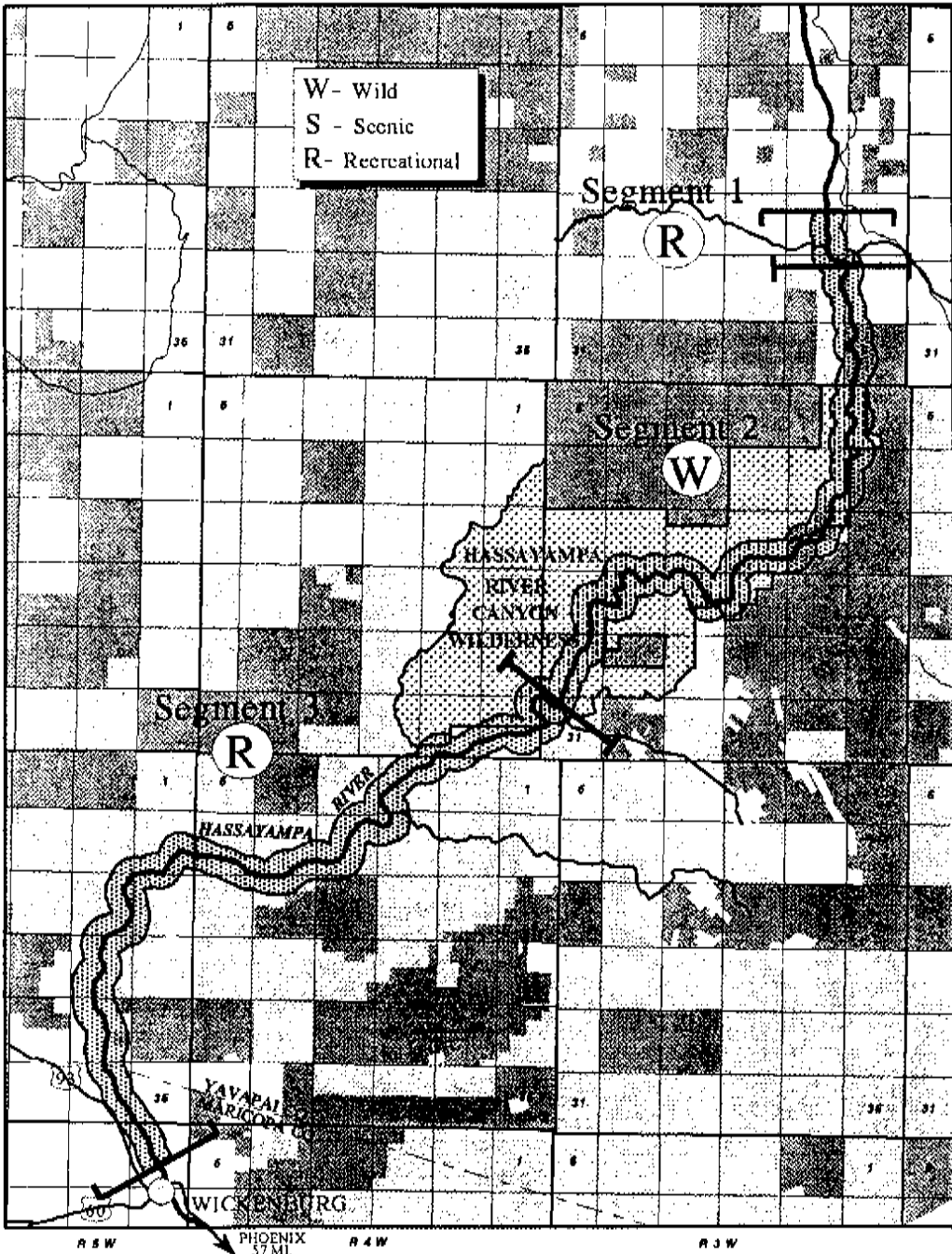
Ongoing management actions

Ongoing management actions in the Hassayampa River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Hassayampa River Canyon Wilderness, the Phoenix Resource Area Resource Management Plan, and the Black Canyon Habitat Management Plan.

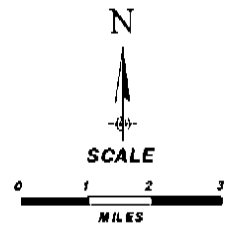
- Mineral entry, leasing, and materials disposals are prohibited on 3,526 acres in segments 2 and 3 under Hassayampa River Canyon Wilderness Area management prescriptions, subject to valid existing rights. Approved mining plans of operations would be required for locatable minerals operations above the level of casual use.
- 2,860 acres of public land in the study area, but outside of the wilderness area, would remain open to mineral entry, leasing, and materials disposals.

HASSAYAMPA RIVER

(All Suitable Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
PHOENIX RESOURCE AREA
October 1994

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

- New major utility corridors would be prohibited.
- Efforts would be made to acquire up to 1,040 acres of private and state land, primarily in segments 1 and 2, on a willing seller-willing buyer basis or through exchange.
- Motorized travel is prohibited on 3,526 acres in the Hassayampa River Canyon Wilderness Area in accordance with management prescriptions for the wilderness, subject to valid existing rights.
- Off-highway vehicle use would be limited to existing roads and trails on 2,860 acres outside the Hassayampa River Canyon Wilderness Area.
- In accordance with the Black Canyon Habitat Management Plan, cottonwood and willow poles would be planted along the Hassayampa River and its tributaries. Although most of the planting would occur outside the study area, up to 200 acres could be planted within it.
- The collection of fire wood for home or commercial use would be prohibited on 6,386 acres to preserve dead trees for bird, lizard, and small mammal habitat.
- Instream flows would be monitored to establish the minimum flow necessary to protect fish and wildlife habitat values.
- The Bureau of Land Management would continue to monitor water quality at selected sites along the Hassayampa River.
- Grazing allotments would be monitored to identify conflicts between livestock grazing and outstandingly remarkable scenic, and fish and wildlife habitat values.
- On the grazing allotments in the river corridor, livestock use would be reduced to eliminate intensive use during the growing season. Seasonal restrictions would allow use only in winter (November through February) and prohibit grazing in riparian areas during the rest

of the year.

The following management actions would be carried out in accordance with the National Historic Preservation Act of 1966, as amended.

- Proposed activities that could result in increased use or surface disturbance would be reviewed by an archaeologist. In most cases, a field inventory of the potentially affected area would be completed.
- Sites determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, would be avoided by a proposed activity if possible.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed and implemented in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

D. ALTERNATIVES CONSIDERED BUT REJECTED

One alternative considered would recommend that segments having a moderate or high potential for mineral development would not be suitable for designation. The entire Hassayampa River study area has a moderate to high potential for mineral development. This alternative was rejected because management actions would be essentially identical to those of the recommended alternative.

An alternative developed by the Arizona Rivers Coalition (1991) would designate the entire study area, as well as additional reaches of the Hassayampa to the north and south, as a wild and scenic river. This alternative was rejected because it would be similar to the all suitable alternative, although there are differences in proposed segment lengths and classifications.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

The Arizona Rivers Coalition recommended that segment 1 and a portion of segment 2 be included in a longer segment designated as Scenic; that segment 2 in the wilderness area be designated as Wild; and that segment 3 be divided into a Scenic segment from the wilderness area boundary to Box Canyon, and a Recreational segment from Box Canyon to

Wickenburg. Projected management actions under the Arizona Rivers Coalition alternative would be similar to those of the all suitable alternative. The all suitable alternative would offer greater protection to 200 acres that would be designated as Wild outside the Hassayampa River Canyon Wilderness Area.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE HR-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Resource or Activity	Recommended alternative	All suitable alternative
Outstandingly Remarkable Scenic Values	Potential adverse impact from development of small and moderate-sized mines; No long-term legislative protection	No adverse impact; Beneficial impact from long-term legislative protection
Outstandingly Remarkable Fish and Wildlife Habitat	Potential adverse impact from development of small and moderate-sized mines; No long-term legislative protection	No adverse impact; Beneficial impact from long-term legislative protection
Water Quality	No direct adverse impact; potential indirect adverse impact from pollution sources upstream of study area	No direct adverse impact; potential indirect adverse impact from pollution sources upstream of study area; Beneficial impact from long-term legislative protection
Mineral Development	No adverse impact	Adverse impact from withdrawal of 200 acres from mineral entry, leasing, and material disposals in area of moderate mineral potential
Construction of Flood Control Facilities	No adverse impact	Adverse impact from prohibition on construction of flood control facilities

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Hassayampa River study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Phoenix Resource Management Plan Amendment (1994), the Upper Sonoran Wilderness Environmental Impact Statement (1987), and the suitability determination report (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Hassayampa River is distinguished by outstandingly remarkable scenic and fish and wildlife habitat values. Outstanding scenic values are a reflection of the area's topographic and ecological diversity.

The steep terrain and vegetational diversity are exceptional for areas of this size within the Sonoran Desert. From the canyon floor to the bordering peaks, a 3,000 foot rise in elevation encompasses several vegetation zones. The study area is dominated by a sinuous river corridor with many side canyons. The most dramatic feature is the Hassayampa River Canyon, where a series of pools is bordered by steep mountain slopes. Distinctive landmarks include two peaks, Sam Powell Peak and the Needle.

The Hassayampa River has outstanding fish and wildlife habitat values representative of the few remaining riparian ecosystems in the Sonoran Desert. Its various elevations and vegetation zones support a rich array of wildlife. The river and the bordering desert provide habitat for over 300 native fish and wildlife species, including two Candidate Category II amphibian and reptile species.

B. MINERALS

The area along the Hassayampa River north of Wickenburg is characterized by moderate and high mineral potential (U.S. Bureau of Mines 1982).

The area incorporating the Hassayampa River study area has a historic record of gold, silver, manganese, barium, and lead production. There has been little production of leasable or saleable minerals. The surrounding area has low potential for oil, gas, coal, or saline minerals.

Patented and unpatented mining claims exist in the study area. Numbers of active mining claims in or near the river segments are 12 for segment 1, 109 for segment 2, and 154 for segment 3. Fewer than ten active placer and lode mining operations are present. Recreational gold panning occurs where roads provide access to the river.

C. LANDS

The Phoenix Resource Management Plan designated no utility corridors in the study area, and no major utility lines exist there. Electrical power is provided to the area north of Wickenburg by the Hassayampa Lake distribution powerline, operated by Arizona Public Service, which crosses the river in segment 3.

No state or federal highways cross the river in the study area. An unpaved county road runs along the east side of the river for two miles south of Wagoner. Several rarely maintained two-track roads lead to the river and occasionally cross the streambed.

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No commercial development exists on the 70 parcels of private land in the study area. Fifty of these parcels are located in segment 3.

D. RECREATION

Phoenix and Wickenburg residents and Wickenburg guest ranches use the Hassayampa River corridor for a variety of recreational activities, primarily hunting, horseback riding, off-road vehicle travel, and gold panning.

Visitors also engage in picnicking, hiking, camping, and birdwatching. There are no developed recreational facilities in the study area.

Annual use of the wilderness area is estimated at 900 visitor days (Upper Sonoran Final Wilderness Environmental Impact Statement 1987). The rest of the area probably receives less than 300 annual visitor use days.

E. FISH AND WILDLIFE

The Hassayampa River study area is rich in wildlife. The various habitats, supporting more than 300 species, include saguaro-paloverde, mixed thorn scrub, mesquite-salt cedar, cottonwood-willow riparian, and chaparral.

Common species include mule deer (*Odocoileus hemionus*), javelina (*Tayassu talacu*), coyotes (*Canis latrans*), red-tailed hawks (*Buteo jamaicensis*), western diamondback rattlesnakes (*Crotalus atrox*), and desert cottontails (*Sylvilagus auduboni*).

The river provides habitat for various native amphibian and fish species including canyon tree frogs (*Hyla arenicolor*), Gila mountain suckers (*Pantosteus clarki*), and longfin dace (*Agosia chrysogaster*). Exotic fish species include fathead minnows (*Pimephales promelas*) and green sunfish (*Lepomis cyanellus*).

No federally listed threatened or endangered species have been observed along the Hassayampa River. Two Candidate Category II

species are known to inhabit the area. Lowland leopard frogs (*Rana yavapaiensis*) occur along the river and its tributaries. Sonoran desert tortoise (*Gopherus agassizii*) inhabit the upland habitat adjacent to the lower end of the study area.

According to the U.S. Fish and Wildlife Service, twelve other federally-listed or candidate species may be present along the Hassayampa River in Yavapai and Maricopa counties. Avian species potentially present include bald eagles (*Haliaeetus leucocephalus*) and peregrine falcons (*Falco peregrinus anatum*), both listed as endangered, and Southwestern willow flycatchers (*Empidonax traillii extimus*), a species proposed for listing as endangered.

Candidate Category II species possibly present in the area include spotted bats (*Euderma maculatum*), California leaf-nosed bats (*Macrotus californicus*), greater western mastiff bats (*Eumops perotis californicus*), Yavapai Arizona pocket mice (*Perognathus amplus amplus*), ferruginous hawks (*Buteo regalis* - wintering only), loggerhead shrikes (*Lanius ludovicianus*), chuckwallas (*Sauromalus obesus*), Arizona toads (*Bufo microscaphus microscaphus*), and Rosy boa snakes (*Lichanura trivirgata*).

State protected and candidate raptors recorded as existing along the Hassayampa River include Mississippi kites (*Ictinia mississippiensis*) and gray hawks (*Buteo lineatus*).

F. VEGETATION

At the upper end of the Hassayampa River study area, the uplands adjacent to the river support shrub live oak (*Quercus turbinella*), juniper (*Juniperus monosperma*), and grasses. On the bordering uplands further south, Sonoran desertscrub vegetation is dominated by palo verde (*Cercidium microphyllum*), saguaro (*Carnegiea gigantea*), mixed cholla cacti (*Opuntia* sp.), creosote (*Larrea tridentata*), and triangle-leaf bursage (*Ambrosia deltoidea*).

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The riparian corridor at the upper end has a dominant overstory of cottonwood (Populus fremontii) and willow (Salix goodingii). Other plant species present include ash (Fraxinus velutina), netleaf hackberry (Celtis reticulata), seepwillow (Baccharis salicifolia), bulrush (Scirpus sp.), and cattail (Typha sp.). Where the streambed broadens in the southern segment of the study area, these species give way to desert broom (Baccharis sarothroides), burroweed (Hymenoclea monogyra), arrowweed (Tessaria sericea), and salt cedar (Tamarix chinensis).

No special status plants are known to exist in the Hassayampa River study area.

Portions of the riparian zone have been degraded due to past mineral exploration, off-highway vehicle use, and livestock grazing practices. A Riparian Area Condition Evaluation Inventory examined a 27.4 mile segment of the river and determined that 20.4 miles (74 percent) are in satisfactory condition and 7.0 miles (26 percent) in unsatisfactory condition. Areas in unsatisfactory condition include 20 percent of public land and 37 percent of state and private land in the riparian zone (Black Canyon Habitat Management Plan 1993).

G. CULTURAL RESOURCES

Few archaeological surveys have been conducted along the Hassayampa River. Although not much is known about the cultural resources in the area, the abundant natural resources of the riparian zone and foothills likely attracted occupation and use in prehistoric times.

Recent surveys of the Hassayampa River Preserve, just south of Wickenburg, indicate that a substantial Hohokam culture community existed there between A.D. 700-1200. Artifact scatters and hilltop pueblo structures have been recorded in the foothills, and additional sites likely exist upstream along the river.

During the 1860s, some of Arizona's earliest and

most productive gold mines were established near Wickenburg and around the Hassayampa headwaters. North of Wickenburg, there may be historic sites associated with mining in the Hassayampa, Placerita, and Weaver-Rich gold placer districts.

H. WATER RESOURCES

The Hassayampa River watershed is included in the Lower Gila River sub-basin of the ongoing Gila River System and Source General Water Rights Stream Adjudication. For the river course in the Hassayampa River Canyon Wilderness Area, a federal reserved water right was granted by the Arizona Desert Wilderness Act of 1990.

Quantification of this reserved right is ongoing, and the Bureau of Land Management will submit notification to the Arizona Department of Water Resources.

Monitoring sites have been established along the river to assess water quality and provide baseline data in support of an instream flow assessment.

The Hassayampa River upstream of Wickenburg has been listed in non-support of state surface water quality standards (Arizona Department of Environmental Quality 1992). Water quality has been degraded by low pH levels, low dissolved oxygen, and high metal concentrations. The pollutants have been traced to several abandoned mines outside the study area north of Wagoner.

Flows on the perennial reach at Box Canyon, located 5.5 miles upstream of Wickenburg, seldom fall below 0.5 cubic feet per second. The yearly average flow is 24.4 cubic feet per second. This average masks the extreme variability in flow that occurs from season to season and year to year. A peak flow of 58,000 cubic feet per second was recorded at this site during the flash flood of September 5, 1970.

Approximately five riparian miles and 1,600

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acres in segment 3 are under a Bureau of Reclamation withdrawal associated with a potential dam site at Box Canyon. The area was studied in conjunction with development of construction alternatives for the Central Arizona Project. The Bureau of Reclamation currently has no plans to construct a dam at the Hassayampa River site.

I. LIVESTOCK GRAZING

The study area is located within 10 range allotments: Minnehaha Creek, Hozoni, JV Bar, Sky Arrow, Box Canyon, Cooper Ranch, Jesus Canyon, Brown, Congress/Sky Arrow, and Hassayampa Lease. These allotments total 10,915 acres, 85 percent of which are administered by the Bureau of Land

Management. There are 1,613 animal unit months authorized on the public land portion of these allotments. An animal unit month is the amount of forage necessary for the sustenance of one cow for one month.

The majority of these areas are in fair to good condition. All of these allotments have been classified as custodial. This classification signifies that an allotment has low production potential and is producing near its capacity, and that present management appears satisfactory although limited resource and use conflicts may exist.

The management objective for custodial allotments is to oversee existing practices while protecting resource values.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Hassayampa River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine. Large mining operations would be those involving more than five acres and subject to an approved plan of operations.

All restrictions on mineral development and access to mining claims would be subject to valid existing rights.

No oil or gas development is anticipated in any of the study areas.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The Hassayampa River study area contains outstandingly remarkable scenic, and fish and wildlife habitat values.

Under the recommended alternative, 29.2 miles encompassing 8,830 acres in the Hassayampa River study area would be determined not suitable for designation, and its outstandingly remarkable values would not receive special

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long-term legislative protection under the Wild and Scenic Rivers Act.

The area along the Hassayampa River north of Wickenburg is characterized by moderate and high mineral potential. Historically it has produced gold, silver, manganese, barium, and lead. Numbers of active mining claims in or near the river segments are 12 for segment 1, 109 for segment 2, and 154 for segment 3. Fewer than ten active placer and lode mining operations currently are present.

Approximately five riparian miles and 1,600 acres in segment 3 are under a Bureau of Reclamation withdrawal associated with a potential dam site at Box Canyon. The area was studied in conjunction with development of construction alternatives for the Central Arizona Project. The Bureau of Reclamation currently has no plans to construct a dam at the Hassayampa River site.

The river study area incorporates 3,526 acres in the Hassayampa River Canyon Wilderness Area, which will be managed, as appropriate, in accordance with the provisions of the Wilderness Act, Bureau of Land Management Manual 8560, and the Hassayampa River Canyon Wilderness Management Plan (draft, 1994).

The outstandingly remarkable scenic, and fish and wildlife habitat values would be subject to the effects of actions allowable under the management of the Hassayampa River Canyon Wilderness Area and the Phoenix Resource Management Plan.

Impacts on Outstandingly Remarkable Scenic Values.

The Hassayampa River is distinguished by outstandingly remarkable scenic values. The steep terrain and vegetational diversity are exceptional for areas of this size within the Sonoran Desert. A 3,000 foot variation in elevation encompasses several vegetation zones. The most dramatic feature is the

Hassayampa River Canyon, where a series of pools is bordered by steep mountain slopes. Distinctive landmarks include two peaks, Sam Powell Peak and the Needle.

In the recommended alternative, management actions associated with wild and scenic river designation would not be implemented. The outstandingly remarkable scenic values would not be under the long-term protection of the Wild and Scenic Rivers Act.

Protection for the outstandingly remarkable scenic values would be provided by the ongoing management activities described in Chapter II. For example, under the recommended alternative, the outstandingly remarkable scenic values on 3,526 acres would be protected by the prohibitions on new mineral entry, mineral leasing, material disposals, road construction, and motorized travel under management of the Hassayampa River Canyon Wilderness Area. Approved mining plans of operations would be required for locatable minerals operations that exceed the level of casual use in the wilderness area.

In accordance with the Phoenix Resource Management Plan, the prohibition on new major utility corridors would protect outstandingly remarkable scenic values by preserving the natural character of the landscape.

Acquiring up 1,040 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable scenic values on the acquired lands.

The 2,860 acres outside the Hassayampa River Canyon Wilderness Area would remain open to mineral entry. According to the mineral development scenarios used in this document, a projected 12 small mining operations employing up to 5 people and 3 moderate-sized operations employing 5-12 people would be developed in the next 20 years.

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The development of small mines potentially could cause adverse impacts to outstandingly remarkable scenic values from surface disturbance, loss of natural vegetation, visible machinery, noise, and new roads associated with these operations. Reclamation, required by the mining laws, would provide some mitigation.

Although no substantial projects are imminent or anticipated, the scoping process indicated a potential for the construction of flood control facilities upstream of Wickenburg. Such facilities could adversely affect scenic values by destroying the naturalness of the area and inundating the river course and riparian vegetation communities.

• Conclusion

Implementation of the recommended alternative would have potential adverse impacts on the outstandingly remarkable scenic values. The development of small and moderate-sized mines or the construction of flood control facilities could negatively impact these values.

The outstandingly remarkable scenic values would not benefit from long-term legislative protection under the recommended alternative.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values.

The Hassayampa River study area supports over 300 species of fish and wildlife. No federally listed threatened or endangered species have been observed along the Hassayampa River. Lowland leopard frogs and desert tortoise, both Candidate Category II species, inhabit the area. According to the U.S. Fish and Wildlife Service, an additional 12 federally listed or candidate species may exist along the Hassayampa River. State protected and candidate raptor species include Mississippi kites and gray hawks. No special status plants are known to exist in the area.

Portions of the riparian zone have been

degraded due to past mineral exploration, off-highway vehicle use, and livestock grazing practices. A Riparian Area Condition Evaluation Inventory examined a 27.4 mile segment of the river and determined that 20.4 miles (74 percent) are in satisfactory condition and 7.0 miles (26 percent) in unsatisfactory condition. Areas in unsatisfactory condition include 20 percent of public land and 37 percent of state and private land in the riparian zone (Black Canyon Habitat Management Plan 1993).

In the recommended alternative, management actions associated with Wild and Scenic River designation would not be implemented. The outstandingly remarkable fish and wildlife habitat values would not be under the long-term protection of the Wild and Scenic Rivers Act.

Protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter 2. For example, the following actions would protect outstandingly remarkable fish and wildlife habitat values.

The collection of dead wood would be prohibited in order to preserve habitat for birds, lizards, and small mammals. Through the seasonal restriction of grazing in the river corridor to the winter months, riparian zones would receive rest from grazing during the growing season.

Acquiring up 1,040 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable fish and wildlife habitat values on the acquired lands.

The outstandingly remarkable values on 3,526 acres would be protected by the prohibitions on new mineral entry, mineral leasing, material disposals, road construction, and motorized travel under management of the Hassayampa River Canyon Wilderness Area. Approved plans of operations would be required for locatable

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minerals operations that exceed the level of casual use in the wilderness area.

The 2,860 acres outside the Hassayampa River Canyon Wilderness Area would remain open to mineral entry. According to the mineral development scenarios used in this document, a projected 12 small mining operations employing up to 5 people and 3 moderate-sized operations employing 5-12 people would be developed in the next 20 years.

The development of small mines potentially could cause adverse impacts to outstandingly remarkable fish and wildlife habitat values from soil erosion and increased stream turbidity, loss of natural vegetation, noise, and new roads associated with these operations. Reclamation, required by the mining laws, would provide some mitigation.

The drainage of pollutants from abandoned mines upstream of the study area could lead to a decline in water quality causing an indirect adverse impact on fish and wildlife habitat.

Although no substantial projects are imminent or anticipated, the scoping process indicated a potential for the construction of flood control facilities upstream of Wickenburg. Such facilities could adversely affect outstanding fish and wildlife habitat values through the inundation and loss of riparian and aquatic habitat.

• Conclusion

Implementation of the recommended alternative would have potential adverse impacts on the outstandingly remarkable fish and wildlife habitat values. The development of small and moderate-sized mines or the construction of flood control facilities could negatively impact these values.

The outstandingly remarkable fish and wildlife habitat values would not benefit from long-term legislative protection under the recommended

alternative.

Impacts on Water Quality.

The Hassayampa River upstream of Wickenburg has been listed as being in non-support of state surface water quality standards (Arizona Department of Environmental Quality 1992). Water quality has been degraded by low pH levels, low dissolved oxygen, and high metal concentrations. The pollutants have been traced to several abandoned mines outside the study area north of Wagoner.

In the recommended alternative, management actions associated with wild and scenic river designation would not be implemented. Water quality would not be protected by provisions of the Wild and Scenic Rivers Act.

The Bureau of Land Management would continue to monitor water quality along the Hassayampa River. Water quality would be protected by ongoing management actions described in Chapter II, such as seasonal restrictions on grazing and relevant provisions included in approved mining plans of operations. However, abandoned mines on private land upstream of the study area will continue to leach metals into the river regardless of the river's legal status.

• Conclusion

There would be no direct adverse impacts on water quality from the implementation of the recommended alternative. However, there could be indirect adverse impacts from pollutants derived from sources upstream from the Hassayampa River study area.

Water quality would not benefit from long-term legislative protection under the recommended alternative.

Impacts on Mineral Development.

The area along the Hassayampa River north of Wickenburg is characterized by moderate and

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high mineral potential (Bureau of Mines 1982). The area incorporating the Hassayampa River study area has a historic record of gold, silver, manganese, barium, and lead production. There has been little production of leasable or saleable minerals.

Both patented and unpatented mining claims exist in the study area. Numbers of active mining claims in or near the river segments are 12 for segment 1, 109 for segment 2, and 154 for segment 3. Fewer than ten active placer and lode mining operations are present.

A projected 12 small mining operations employing up to 5 people and 3 moderate-sized operations employing 5 to 12 people, all under 5 acres, would be developed in the next 20 years. Each mine would be served by two or more miles of road.

Mineral entry, leasing, and materials disposals are prohibited on 3,526 acres in segments 2 and 3 under Hassayampa River Canyon Wilderness Area management prescriptions, subject to valid existing rights. Approved plans of operations would be required for locatable minerals operations that exceed the level of casual use.

The remaining 2,860 acres of public land in the study area would remain open to mineral entry, leasing, and material disposals.

• Conclusion

There would be no adverse impacts on mineral development from the implementation of the recommended alternative.

Impacts on Construction of Flood Control Facilities.

The Bureau of Land Management has established monitoring sites along the Hassayampa River to provide baseline data in support of an instream flow assessment.

Reaches of the river go dry during the summer

and fall of most years. A gauge at Box Canyon, 5.5 miles north of Wickenburg along a perennial stretch, has consistently recorded flows exceeding 0.5 cubic feet per second. A peak flow of 58,000 cubic feet per second was recorded at this site during the flash flood of September 5, 1970. A large flood event during the spring of 1993 caused some property damage along the river in the vicinity of Wickenburg.

Approximately five riparian miles and 1,600 acres in segment 3 are under a Bureau of Reclamation withdrawal associated with a potential dam site at Box Canyon. The area was studied in conjunction with development of construction alternatives for the Central Arizona Project. The Bureau of Reclamation currently has no plans to construct a dam at the Hassayampa River site.

Although no substantial projects are imminent or anticipated, the scoping process indicated a potential for the construction of flood control facilities upstream of Wickenburg. The construction of such facilities would not be restricted under the recommended alternative.

• Conclusion

There would be no adverse impact on the construction of flood control facilities from the implementation of the recommended alternative.

Cumulative Impacts of Implementing the recommended alternative.

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined in a corridor

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approximately five miles on either side and both ends of the Hassayampa River study area.

Over most of the area, the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Hassayampa River Canyon Wilderness Area and the Phoenix Resource Management Plan.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative.

Under the recommended alternative, mineral entry would be allowed and resource management activities would be subject to the Hassayampa River Canyon Wilderness Area and the Phoenix Resource Management Plan. There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse effects due to the restrictions on activities from the Hassayampa River Canyon Wilderness Area and the Phoenix Resource Management Plan.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

Under the all suitable alternative, the entire Hassayampa River study area would be

determined suitable and recommended for designation. Its outstandingly remarkable values would receive special legislative protection in addition to that provided in the Hassayampa River Canyon Wilderness Area. Segment 1 would be recommended suitable for designation as Recreational, segment 2 as Wild, and segment 3 as Recreational.

The outstandingly remarkable scenic, and fish and wildlife habitat values would be subject to the effects of actions allowable under the management of the Hassayampa River Canyon Wilderness Area and the Phoenix Resource Management Plan, and in accordance with the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Scenic Values.

The Hassayampa River is distinguished by outstandingly remarkable scenic values. The steep terrain and vegetational diversity are exceptional for areas of this size in the Sonoran Desert. A 3,000 foot variation in elevation encompasses several vegetation zones. The most dramatic feature is the Hassayampa River Canyon, where a series of pools is bordered by steep mountain slopes. Distinctive landmarks include two peaks, Sam Powell Peak and the Needle.

Under the all suitable alternative, management actions associated with Wild and Scenic River management would occur. In segment 2, 200 acres designated as Wild outside the wilderness area would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals. These actions would prevent damage to outstandingly remarkable scenic values from surface disturbance, the presence of machinery, or noise associated with mineral activities.

Mining patents could only apply to the mineral estate on 6,386 acres. This would ensure continued federal protection of the surface estate. Long-term protection of the outstandingly remarkable scenic values would

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result from this action.

Plans of operations would be required for all activities above the level of casual use, on 2,860 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development. Under provisions of the Wild and Scenic Rivers Act, mineral development would be conducted so as to minimize negative impacts from visual impairment, surface disturbance, sedimentation, and pollution.

Constructing new roads would be prohibited on 200 acres designated as Wild in segment 2. Motorized use would be restricted, except for search and rescue or emergencies, on those 200 acres. These actions would protect the outstandingly remarkable scenic values by preserving the area's pristine quality.

Prohibiting the construction of new dams, levees, hydropower facilities, or major types of diversions on 18.4 riparian miles along the Hassayampa River would retain the waterway in the condition it was when the outstandingly remarkable scenic values were identified.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, limiting travel to existing roads and trails on 2,860 acres would protect outstandingly remarkable scenic values by preventing erosion and preserving the natural character of roadless areas.

The prohibition on new major utility corridors would protect outstandingly remarkable scenic values by preserving the natural character of the landscape.

Acquiring up 1,040 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable scenic values on the acquired lands.

The outstandingly remarkable scenic values on 3,526 acres would be protected by the prohibitions on new mineral entry, mineral leasing, material disposals, and motorized travel under management of the Hassayampa River Canyon Wilderness Area.

• Conclusion

Implementation of the all suitable alternative would have no adverse impacts on the outstandingly remarkable scenic values. A beneficial impact would result from long-term legislative protection of these values.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values.

The Hassayampa River study area supports over 300 species of fish and wildlife. No federally listed threatened or endangered species have been observed along the Hassayampa River. Lowland leopard frogs and desert tortoise, both Candidate Category II species, inhabit the area. According to the U.S. Fish and Wildlife Service, an additional 12 federally listed or candidate species may exist along the Hassayampa River. State protected and candidate raptor species include Mississippi kites and gray hawks. No special status plants are known to exist within the area.

Portions of the riparian zone have been degraded due to past mineral exploration, off-highway vehicle use, and livestock grazing practices. A Riparian Area Condition Evaluation inventory examined a 27.4 mile segment of the river and determined that 20.4 miles (74 percent) are in satisfactory condition and 7.0 miles (26 percent) in unsatisfactory condition. Areas in unsatisfactory condition include 20 percent of public land and 37 percent of state and private land in the riparian zone (Black Canyon Habitat Management Plan 1993).

Under the all suitable alternative, management actions associated with Wild and Scenic River management would occur. In segment 2, 200 acres designated as Wild outside the wilderness

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area would be withdrawn from mineral entry and closed to mineral leasing and mineral material disposals. These actions would prevent damage to outstandingly remarkable fish and wildlife habitat values from surface disturbance, noise, or other conflicts associated with mineral activities.

Mining patents could only apply to the mineral estate on 6,386 acres. This would ensure continued federal protection of the surface estate. Long-term protection of the outstandingly remarkable habitat values would result from this action.

Mining plans of operations would be required for all activities above the level of casual use on 2,860 acres. Approved plans of operations would ensure that outstandingly remarkable values would not be degraded by mineral development. Under provisions of the Wild and Scenic Rivers Act, mineral development would be conducted so as to minimize negative impacts from surface disturbance, sedimentation, and pollution.

Constructing new roads would be prohibited on 200 acres designated as Wild in segment 2. Motorized use would be restricted, except for search and rescue or emergencies, on those 200 acres. These actions would protect the outstandingly remarkable fish and wildlife habitat values by reducing surface disturbance and disruption caused by human traffic.

Prohibiting the construction of new dams, levees, hydropower facilities, or major types of diversions on 18.4 riparian miles along the Hassayampa River would retain the waterway in the condition it was when the outstandingly remarkable values were identified.

Additional protection for the outstandingly remarkable scenic values would be supplied by ongoing management activities described in Chapter II. For example, the following actions would protect outstandingly remarkable fish and wildlife habitat values.

The collection of dead wood would be prohibited in order to preserve habitat for birds, lizards, and small mammals. Through the seasonal restriction of grazing in the river corridor to the winter months, riparian zones would receive rest from grazing during the growing season.

Acquiring up 1,040 acres of private and state land, on a willing seller-willing buyer basis or by exchange, would increase the area under federal management. This action would enable long-term protection of outstandingly remarkable fish and wildlife habitat values on the acquired lands.

The outstandingly remarkable values on 3,526 acres would be protected by the prohibitions on new mineral entry, mineral leasing, material disposals, road construction, and motorized travel under management of the Hassayampa River Canyon Wilderness Area.

• Conclusion

There would be no adverse impacts on the outstandingly remarkable fish and wildlife habitat from the implementation of the all suitable alternative. A beneficial impact would result from long-term legislative protection of these values.

Impact on Water Quality

The Hassayampa River upstream of Wickenburg has been listed as being in non-support of state surface water quality standards (Arizona Department of Environmental Quality 1992). Water quality has been degraded by low pH levels, low dissolved oxygen, and high metal concentrations. The pollutants have been traced to several abandoned mines outside the study area north of Wagoner.

Under the all suitable alternative, management actions associated with Wild and Scenic River designation would be implemented. Water quality would be protected by provisions of the Wild and Scenic Rivers Act, which require

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actions to maintain or improve water quality.

The Bureau of Land Management would continue to monitor water quality along the Hassayampa River. Water quality would be protected by ongoing management actions described in Chapter 2, such as seasonal restrictions on grazing. However, abandoned mines on private land upstream of the study area will continue to leach metals into the river regardless of the river's legal status.

• Conclusion

There would be no adverse impacts on water quality from the implementation of the all suitable alternative.

However, there could be indirect adverse impacts from pollutants derived from sources upstream from the Hassayampa River study area.

Since good water quality is a key to the maintenance of scenic values and productive fish and wildlife habitats, water quality also would benefit from the long-term legislative protection provided to the outstandingly remarkable scenic, and fish and wildlife habitat values under the all suitable alternative.

Impacts on Mineral Development.

The area along the Hassayampa River north of Wickenburg is characterized by moderate and high mineral potential, as mapped in the Upper Sonoran Final Wilderness Environmental Impact Statement (Bureau of Mines 1982). The area incorporating the Hassayampa River study area has a historic record of gold, silver, manganese, barium, and lead production. There has been little production of leasable or saleable minerals.

Patented and unpatented mining claims exist in the study area. Numbers of active mining claims in or near the river segments are 12 for segment 1, 109 for segment 2, and 154 for segment 3. Fewer than ten active placer and lode mining operations are present.

A projected 12 small mining operations employing up to five people and three moderate-sized operations employing five to 12 people, all under five acres, would be developed within the next 20 years. Each mine would be served by two or more miles of road.

Mineral entry, leasing, and material disposals are prohibited on 3,526 acres in segments 2 and 3 under Hassayampa River Canyon Wilderness Area management prescriptions, subject to valid existing rights.

Under the all suitable alternative, 200 acres designated as Wild in segment 2, outside the wilderness area, would be withdrawn from new mineral entry and closed to mineral leasing and mineral material disposals, subject to valid existing rights.

New mining claims would be allowed in segments 1 and 3. The Bureau of Land Management would permit reasonable access to mining claims in segment 2 and to claims and mineral leases in segments 1 and 3.

Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate on 6,386 acres.

Approved plans of operations would be required for all mining related activities, above the level of casual use as defined at 43 CFR 3809.0-5(b), on 2,860 acres. Approved plans of operations currently are required for all mining operations on 3,526 acres in the wilderness area.

• Conclusion

Implementation of the all suitable alternative would have a minor adverse impact on mineral development resulting from the withdrawal of 200 acres from mineral entry and closure to mineral leasing and material disposals in segment 2, an area of moderate to high mineral potential. The requirement for approved mining plans of operations, for all activities above casual use on 2,860 acres, could increase some

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

of the costs associated with mineral development.

Impacts on Construction of Flood Control Facilities.

The Bureau of Land Management has established monitoring sites along the Hassayampa River to provide baseline data in support of an instream flow assessment.

Reaches of the river go dry during the summer and fall of most years. A gauge at Box Canyon, 5.5 miles north of Wickenburg along a perennial stretch, has consistently recorded flows exceeding 0.5 cubic feet per second. A peak flow of 58,000 cubic feet per second was recorded at this site during the flash flood of September 5, 1970. A large flood event during the spring of 1993 caused some property damage along the river in the vicinity of Wickenburg.

Approximately five riparian miles and 1,600 acres in segment 3 are under a Bureau of Reclamation withdrawal associated with a potential dam site at Box Canyon. The area

was studied in conjunction with development of construction alternatives for the Central Arizona Project. The Bureau of Reclamation currently has no plans to construct a dam at the Hassayampa River site.

Although no substantial projects are imminent or anticipated, the scoping process indicated a potential for the construction of flood control facilities upstream of Wickenburg.

Under the all suitable alternative, the construction of new dams, levees, hydropower facilities, or major types of diversions would be prohibited on 18.4 riparian miles along the Hassayampa River.

• Conclusion

There would be an adverse impact on the construction of dams or other flood control facilities from implementation of the all suitable alternative.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Hassayampa River Wild and Scenic River Suitability Environmental Impact Statement was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Statement began in January, 1993.

B. ELIGIBILITY

A determination was made in the Phoenix Resource Management Plan Amendment (1993) that the Hassayampa River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Phoenix Resource Management Plan Amendment is on file at the Phoenix Resource Area Office, Phoenix, Arizona, and the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Hassayampa River Wild and Scenic Study Area were held in Wickenburg on April 7, 1993 and Phoenix on April 14, 1993. Seventeen to 20 people attended the Wickenburg meeting and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

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C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

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B. Smith, Renewable Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

HASSAYAMPA RIVER WILD AND SCENIC RIVER STUDY AREA

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**HOT SPRINGS CANYON
WILD AND SCENIC RIVER STUDY AREA**

**TUCSON RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

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HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Hot Springs Canyon River were identified in the Safford District Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of Hot Springs Canyon to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Hot Springs Canyon Wild and Scenic River Study Area is in Cochise County in southeastern Arizona about thirty miles north of Benson. The segment under consideration is approximately six miles long with one mile flowing through state and private land.

This segment begins in the NE1/4, Sec. 36 T.12S. R.20E. and continues downstream to the NW1/4, Sec. 5 T.13S R.20E. This reach is considered one segment that exhibits a fairly uniform distribution of resources and values downstream of the Hot Springs Canyon-Bass Canyon confluence. This segment was considered eligible for wild and scenic river designation in the Safford District Resource Management Plan because it is free-flowing and possesses outstandingly remarkable fish and wildlife values. It is tentatively classified as Wild because the shoreline is primitive and undeveloped there are no roads or other developments in the corridor.

Most of the land is in public ownership although The Nature Conservancy and the state own short reaches of the canyon bottom. Hot Springs Canyon is a perennial stream within the Basin and Range Physiographic Province in the Sonoran biotic community. This stream drains approximately 110 square miles of private and state and public lands administered by the U.S. Forest Service and the Bureau of Land Management.

**TABLE HS-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

HOT SPRINGS CANYON CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	5.0	0.5	0.5	6.0
PERCENT	83.3	8.3	8.3	100
TOTAL ACRES	1,600.0	160.0	160.0	1,920
PERCENT	83.3	8.3	8.3	100
SUBSURFACE MINERALS ACRES	1,600.0	160.0	160.0	1,920

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

C. INTERRELATIONSHIPS

1. The Bureau of Land Management

The segment of Hot Springs Canyon under consideration for designation is contained within the 16,763 acre Hot Springs-Swamp Springs Watershed Area of Critical Environmental Concern. This area of critical environmental concern was identified for designation in the Safford District Resource Management Plan (1993). The Hot Springs Canyon study area will be managed under the provisions of the Muleshoe Ecosystem Management Plan whether or not it is designated as a wild and scenic river.

The area of critical environmental concern values of regional significance requiring special management, identified in the resource management plan, include riparian vegetation, threatened and endangered species, bighorn sheep, native fish and cultural resources.

Two wilderness areas are located north of the perennial reach of Hot Springs Canyon. The Redfield Canyon Wilderness is managed by the Bureau of Land Management but does not include any of the Hot Springs Canyon watershed. The U.S. Forest Service managed Galiuro Wilderness contains a portion of the upper Hot Springs watershed. The segment under consideration is not included in either of these wilderness areas.

2. Federal agencies

The U.S. Forest Service manages the Galiuro Mountains as part of the Coronado National Forest. Most of the land in these mountains is designated and managed as wilderness and contains part of the upper watershed. The U.S. Forest Service also manages the Winchester Mountains to the east that contain another portion of the upper watershed. The Winchester Mountains are managed under general U.S. Forest Service principles of multiple use and sustained yield and have no special management designation.

**TABLE HS-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE HOT SPRINGS CANYON
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

HOT SPRINGS CANYON RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Hot Springs-Swamp Springs Watershed Area of Critical Environmental Concern	1,600	83.3

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

3. State

The lower 1/2 mile of this segment flows through state land before it becomes ephemeral upstream of the canyon's confluence with the San Pedro River.

4. County

Hot Springs canyon is located in Cochise county.

5. Local

Several natural resource conservation districts, the Soil Conservation Service, Bureau of Land Management, Forest Service, county and city governments, The Nature Conservancy and other private organizations and citizens have started a coordinated resource management process for the entire San Pedro watershed upstream of Winkelman, Arizona. The Muleshoe Ranch and Hot Springs Canyon are in the planning area of this coordinated resource management process.

6. Private

Hot Springs Canyon is located on the Muleshoe Ranch, an historic cattle ranch, now partially owned and operated as a nature preserve by The Nature Conservancy. The ranch is a mix of Bureau of Land Management, U.S. Forest Service and private (The Nature Conservancy) land.

The Nature Conservancy headquarters is located at the historic Hooker Hot Springs near the upstream end of this segment. The Nature Conservancy also own a 1/2 mile stretch of the creek bottom, in the segment under consideration, about two miles downstream of the headquarters.

D. SCOPING

Scoping meetings specifically highlighting the Hot Springs Canyon study area were held in

Winkelman April 12, with nearly a dozen people attending, in Tucson on April 13 attended by 35-40 people, and in Benson April 15 where about 10 signed the register.

The issues concern the impacts of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the Hot Springs Canyon study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Uses or resources raised as issues specifically for this Hot Springs Canyon study area include the following.

Scoping Issues

- Impacts on water rights
- Impacts on the property base
- Impacts to federal agencies (cost of management)
- Impacts of dual area of critical environmental concern and wild and scenic river designation
- Impacts on private property values
- Impacts on crossing the study area to access adjacent public lands
- Need to make the evaluation and designation process more open to the public
- Impacts on outstandingly remarkable fish and wildlife values (five species of native fish and nesting grey hawks)
- Impacts on mineral development
- Impacts on recreation use, (hunting, fishing, off-highway vehicle)
- Impacts on tourism
- Impacts on livestock grazing

Issues Considered but not Analyzed

- Impact on water rights.

The Bureau of Land Management and The Nature Conservancy are pursuing the acquisition of instream flow water rights for Hot Springs Canyon.

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

The application filed with Arizona Department of Water Resources in 1988 identified beneficial uses of recreation, wildlife and fish. In 1993 the Arizona Department of Water Resources issued a water right permit #33-94372.0000 to Bureau of Land Management and The Nature Conservancy for the two measurement points.

The permit grants a median flow of 2.6 cubic feet per second at the lower measurement point and 2.4 cubic feet per second at the upper measurement point. These flows vary on a monthly basis and are identified in the justification document.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the Act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further.

- Impacts on the property base

Acquisition of non-federal land is a management

objective in the Safford District Resource Management Plan for the Swamp Springs-Hot Springs Area of Critical Environmental Concern. The study area is contained in the area of critical environmental concern.

A total of 320 acres of nonfederal land is identified for acquisition. This land is owned by the state of Arizona and The Nature Conservancy, neither of which pay property tax. This acquisition will not affect the private property tax base in the area. The acquisition process would only move forward and be completed on a willing seller-willing buyer basis.

The issue of impacts on the land base will not be discussed further.

- Impacts to federal agencies (cost of management).

The Wild and Scenic Rivers Act requires that all eligible rivers be evaluated for suitability for inclusion in the National Wild and Scenic Rivers System.

This issue will not be considered further.

- Need to make the evaluation and designation process more open to the public.

The Bureau of Land Management has rigorously followed appropriate requirements in its scoping and public review processes for wild and scenic river eligibility determination and suitability recommendation.

The process encourages public input and is described in detail in chapters I and V in this document.

This issue will not be discussed further.

- Impacts of dual area of critical environmental concern and wild and scenic river designation.

There would be no environmental impacts from dual management designation since the

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

management actions would always comply with the most stringent requirements.

For example, in a segment designated as a Wild river which also is under area of critical environmental concern management, mineral entry would be closed due to the Wild river designation regardless of guidance in the area of critical environmental concern.

This issue will not be discussed further.

- impacts on crossing the study area to access adjacent public lands.

Access to the study area and adjacent public lands will not be affected. Access in the area is by roads that will not be affected whether the stream is designated or not.

This issue will not be discussed further.

- impacts on private property values.

The Nature Conservancy owns 160 acres of land within the study area. Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on

private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There are no impacts expected on private property values or uses from implementation of the alternatives.

This issue will not be discussed further.

- Impacts on tourism.

The current level of visitor use is low. If the study area were designated Wild a moderate increase estimated at 1,700 to 1,800 annual visitors may occur through national recognition of the area brought about by designation. This would not have a measurable affect on the local population or economic factors.

The issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Hot Springs Canyon study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of Wild and Scenic River designation or the area being returned to management under existing plans.

The following alternatives are analyzed:

Recommended alternative
All suitable

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines the entire Hot Springs Canyon study area to be nonsuitable and does not recommend the study area for designation. Implementation of the recommended alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

In the case of Hot Springs Canyon, most of the study area is included in the Swamp Springs-Hot Springs Watershed Area of Critical Environmental Concern. The lower 3/4 miles of the area is located on state land outside the Swamp Springs-Hot Springs Area of Critical Environmental. Management of the area is prescribed in the 1993 Safford District Resource

Management Plan (Table 2-1 and Appendix 2). Activity level planning for the area is addressed in the Muleshoe Ecosystem Management Plan initiated in 1993.

Wild and Scenic River management actions

The recommended alternative determines the Hot Springs Canyon study area to be nonsuitable. No management actions associated with Wild and Scenic River designation would apply.

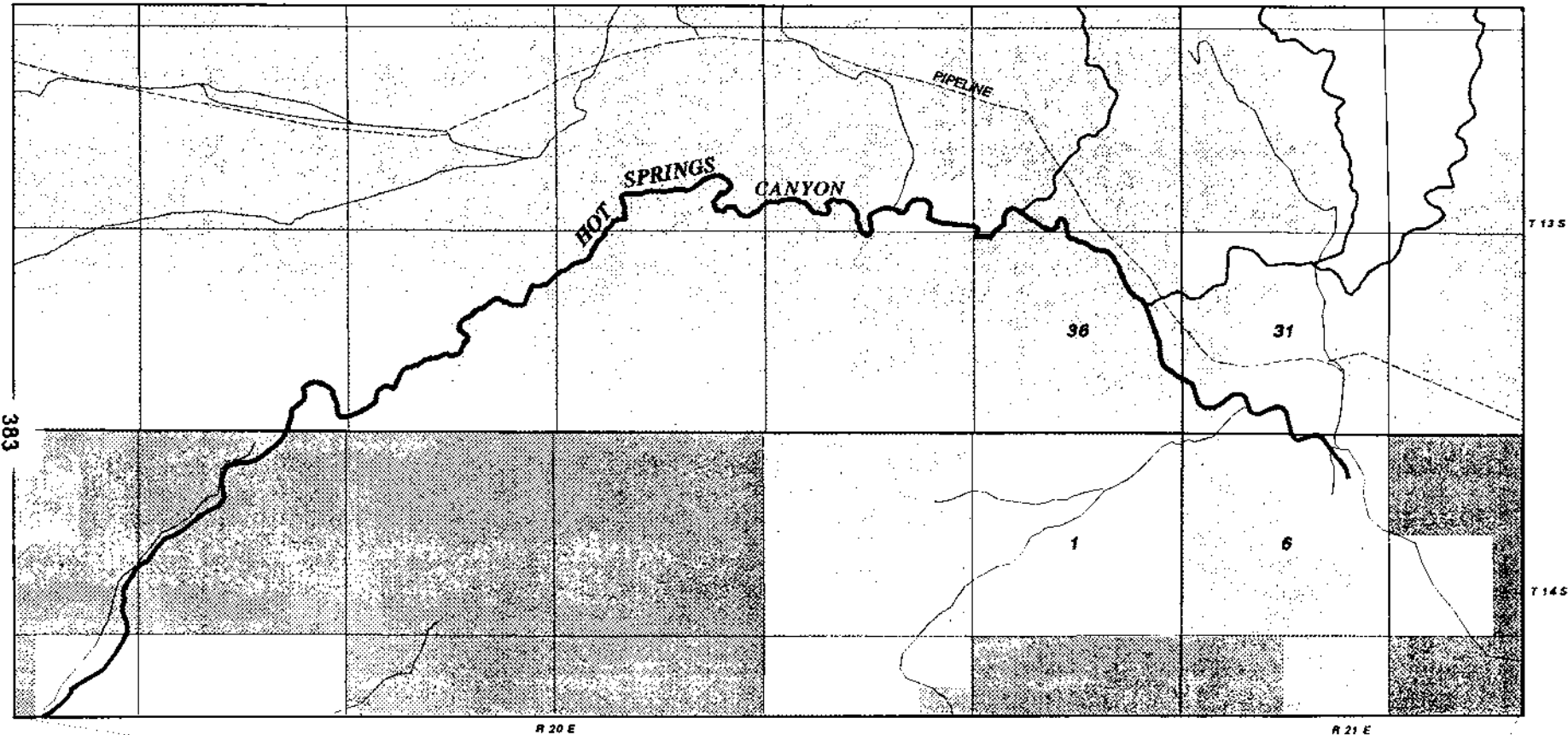
Ongoing management actions

The ongoing management actions listed below are summaries of selected management provisions of the Safford District Resource Management Plan and Swamp Springs Hot Springs Watershed Area of Critical Environmental Concern.

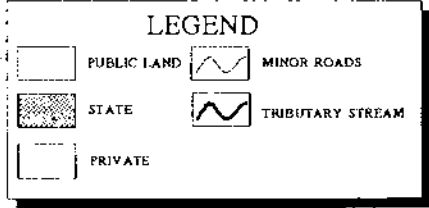
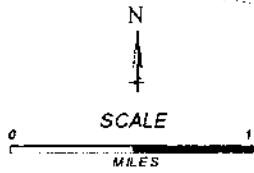
- The Hot Springs Canyon study area will remain open to mineral entry. Plans of operations would be required for all mining activities above the level of casual use. A no surface occupancy stipulation would be required for mineral leasing activities in the riparian zone of the study area.
- The Hot Springs Canyon study area will be managed for dispersed recreation. This includes hiking, hunting picnicking, bird watching and camping.
- The area is designated as a Visual Resource Management Class II zone. The objective of this class is to maintain the existing character of the landscape.
- The area is closed to woodcutting.
- The riparian area of Hot Springs Canyon is closed to off-highway vehicle use.

HOT SPRINGS CANYON

(Recommended Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA
October 1994



HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

- Establish the Gila chub as a priority species and manage habitat to maintain or increase population levels.
- Establish the gray hawk as a priority species and manage habitat to maintain or increase population levels.
- Manage riparian vegetation in accordance with the Bureau of Land Management goal of having 75 percent of the riparian areas in functional condition and in an advanced ecological status.
- Stream flow will be monitored on a monthly basis to protect the existing instream flow water right and advance it to the certificate stage.
- Hot Springs Canyon will be evaluated for designation as a Unique Water under state law.
- Livestock use of the study area will follow the grazing prescription developed in the Muleshoe Ecosystem Management Plan for Swamp Springs-Hot Springs Area of Critical Environmental Concern. Livestock will either be excluded from the 160 acre riparian zone associated with stream segment or managed in a manner that protects the riparian and other resource values.

C. ALL SUITABLE

The all suitable alternative determines the entire length of the Hot Springs Canyon study area to be suitable and recommends the study area for designation under a Wild classification.

In the case of Hot Springs Canyon the majority of the study area is included in the Swamp Springs Hot Springs Watershed Area of Critical Environmental Concern. The lower 3/4 miles of the area is located on state land outside the Swamp Springs-Hot Springs Area of Critical Environmental. One-half mile of the stream flows across 160 acres of The Nature Conservancy land within the area of critical environmental concern.

Wild and Scenic River management actions

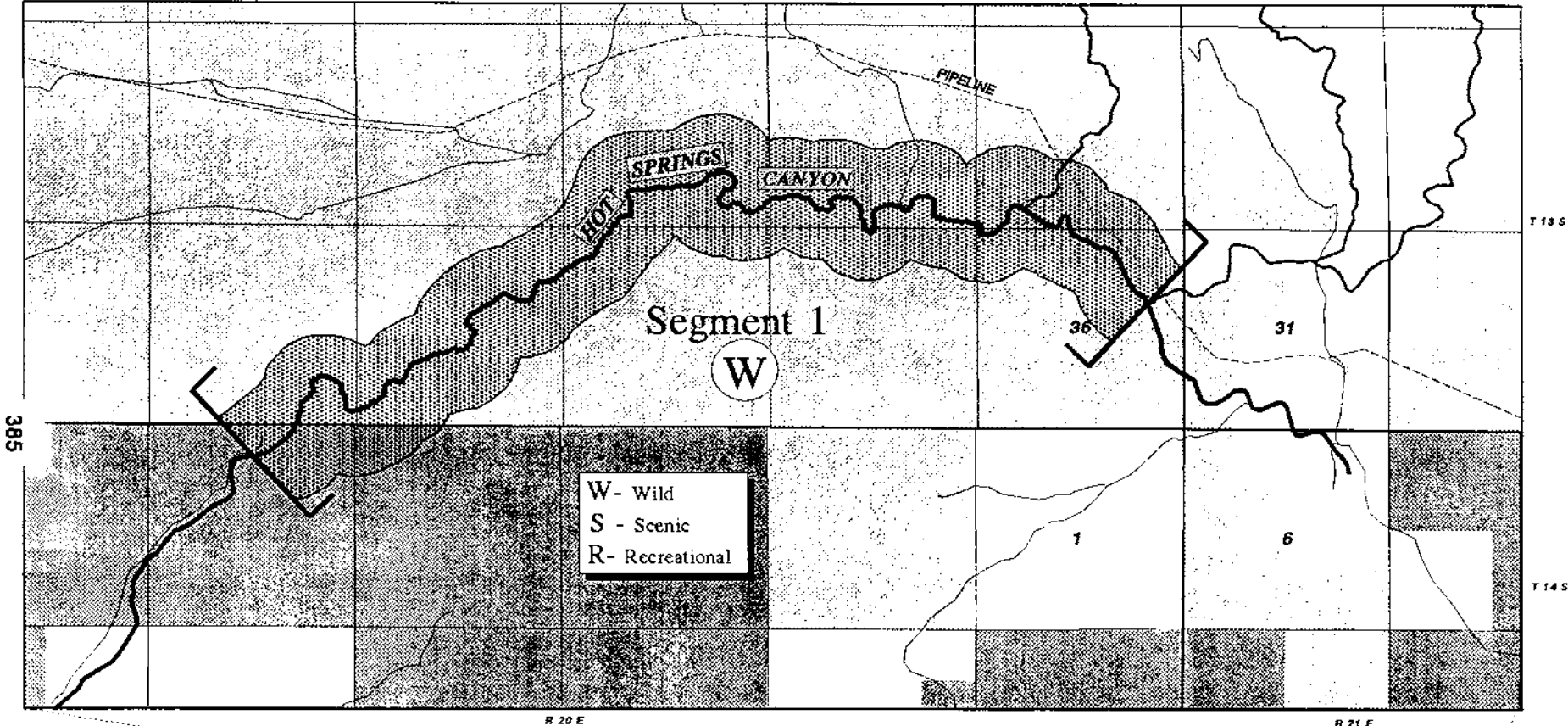
Wild and Scenic River designation would require certain management actions to be initiated.

In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur in the Hot Springs Canyon recommended for designation as a Wild river. If a Wild and Scenic River management action conflicts with an ongoing management action, the more stringent would be implemented.

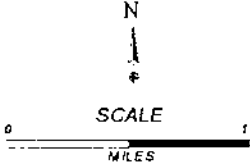
- The study area would be withdrawn from mineral entry and leasing by designation as a wild and scenic river with a Wild classification. Valid existing claims would be recognized; existing mining activity would be allowed to continue.
- New mining patents would be restricted to the mineral estate.
- Water quality would be maintained or improved.
- Hydroelectric power facilities would be prohibited.
- No new flood control dams, levees, or other works would be permitted.
- All water supply dams and major diversions would be prohibited.
- Construction of new roads or trails for motorized travel would be prohibited.
- Motorized use would be restricted.
- Campgrounds, interpretive centers, or administrative headquarters within the river corridor would be prohibited. Simple comfort and convenience facilities could be permitted.
- Recreation use would be encouraged in Wild river areas but public use and access could be regulated.

HOT SPRINGS CANYON

(All Suitable Alternative)



UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 SAFFORD DISTRICT
 GILA RESOURCE AREA
 October 1994



LOCATION DIAGRAM

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

- Woodcutting would not be permitted except when needed to clear trails, for visitor safety or to control fire.
- Livestock grazing use would be restricted to current levels.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable values.

Ongoing management actions

Ongoing management actions in the Hot Springs study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Safford District Resource Management Plan and Swamp Springs-Hot Springs Watershed Area of Critical Environmental Concern.

- The study area will be managed for dispersed recreation. This includes hiking, hunting, picnicking, bird watching and camping.
- The portion of the study area located on public lands is closed to off-highway vehicles.

- The area is designated as a Visual Resource Management Class II zone. The objective of this class is to maintain the existing character of the landscape.
- The area is closed to woodcutting.
- Establish the Gila chub as a priority species and manage habitat to maintain or increase population levels.
- Establish the gray hawk as a priority species and manage habitat to maintain or increase population levels.
- Manage riparian vegetation in accordance with the Bureau of Land Management goal of having 75 percent of the riparian areas in functional condition and in an advanced ecological status.
- Stream flow will be monitored on a monthly basis to protect the existing instream flow water right and advance it to the certificate stage.
- Hot Springs Canyon will be evaluated for designation as a Unique Water under state law.
- Livestock grazing would be managed on the 1,600 acres of public land the study area to meet the objectives of the Muleshoe Ecosystem Management Plan.

D. ALTERNATIVES CONSIDERED BUT REJECTED

No other alternatives were recommended by the public or other agencies.

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

**TABLE HS-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative (no action/not suitable)	All suitable
Impacts on outstandingly remarkable fish populations and fish habitat	No long-term legislative protection under the Wild and Scenic Rivers Act; administrative protection from the Area of Critical Environmental Concern	No adverse impacts; long-term legislative protection under the Wild and Scenic Rivers Act
Impacts on outstandingly remarkable wildlife populations and wildlife habitat	No long-term legislative protection under the Wild and Scenic Rivers Act; administrative protection from the Area of Critical Environmental Concern	No adverse impacts; long-term legislative protection under the Wild and Scenic Rivers Act
Impacts on Mineral Development	No adverse impacts	No adverse impacts 1,920 acres withdrawn from mineral entry
Impacts on Recreation	No adverse impacts	No adverse impacts

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III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Hot Springs Canyon study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System. Further information is contained in the Safford District Resource Management Plan and the Hot Springs Canyon Wild and Scenic suitability determination assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Safford District Resource Management Plan identified outstandingly remarkable fish and wildlife habitat. This supports four species of native fish and also nesting gray hawks.

B. MINERAL POTENTIAL

There are no existing mining operations or valid claims in the Hot Springs Canyon study area.

The potential for mineral resources is not considered high. An evaluation completed in 1987 states that there are no identified mineral resources in the area nor are there indications of undiscovered resources (Summary of Mineral and Mineral Resource Potential of the Galiuro Addition Wilderness Study Area (AZ-040-081), Graham County, Arizona, William J. Keith, U.S. Geological Survey and Terry J. Kredler, U.S. Bureau of Mines). Another study Mineral Land Assessment MLA-43-88 conducted in 1988 by Russel A. Schreiner of the U.S. Department of Interior Bureau of Mines addresses the Muleshoe area and confirms the lack of mineral resources within the study area.

C. LANDS

Access to Hot Springs Canyon is provided by a well maintained gravel road through The Nature Conservancy property at Hooker Hot Springs.

A second access route utilized by four wheel

drive vehicles and Off Highway Vehicles is via gravel road and normally dry wash to the beginnings of perennial flow near the mouth of the canyon.

A third historic access point was by way of the All American pipeline road that parallels the stream generally outside of the wild and Scenic River corridor. This access route is extremely steep and narrow in places and has been closed to the public since 1982.

Administrative access remains available on this road. The identified roads provide point access at the upper and lower ends of the segment. No roads parallel the stream within the established corridor.

Administrative access from the pipeline road is limited to point access at one location.

Access to other public lands in the Muleshoe area, including the Galiuro and Redfield Canyon Wilderness is provided by way of Jackson Cabin road.

No roads cross the Hot Springs Canyon within the study area.

The study area is located in a right-of-way avoidance zone established in the resource management plan.

D. RECREATION

Information provided by the Arizona Chapter of the Nature Conservancy show that in the previous twelve months 1,675 visitors utilized the Muleshoe area.

The Nature Conservancy overnight facilities at Hooker Hot Springs were used by 825 visitors and an additional 850 people signed in at the Jackson Cabin Road entrance for day or back country use.

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Since the sign-in procedures are voluntary/unsupervised these numbers can be considered very conservative.

An estimated use of 1,700 to 1,800 visitors per year to this area is reasonable. This represents an increase of 300 to 500 visitors over a similar time period in 1991-1992.

An unknown number of visitors access Hot Springs Canyon by driving across state lands in the normally dry lower canyon. Primitive camp areas and fire rings can be found near the end of the perennial flow on state land.

Although not all visitors use Hot Springs Canyon, recreation in Arizona is known to focus on riparian areas. Hiking, hunting, and bird watching all focus on the Muleshoe riparian areas.

Hunting for deer, javalina and quail are popular activities in and around the Muleshoe area. The Nature Conservancy prohibits hunting on their private land in this area.

Public and state lands are open for hunting during the various hunting seasons. No fishing opportunities exist in the canyon due to the species of native fish inhabiting the stream.

The riparian area of Hot Springs Canyon is closed to off highway vehicle use (Safford District Resource Management Plan, 1993). The Nature Conservancy controls access to the canyon above the segment under consideration and prohibits off highway vehicle access. No off highway vehicle use occurred in 1992.

Low to moderate levels of use consisting of the supervised use of The Nature Conservancy overnight facilities and dispersed recreation in a primitive and remote setting have caused few visitor related problems. Visitor management activities are cooperatively conducted by The Nature Conservancy and the Bureau of Land Management.

E. WILDLIFE

The Safford District Resource Management Plan identified outstandingly remarkable fish and wildlife values in Hot Springs Canyon. These values included four species of native fish and nesting gray hawks.

Bureau of Land Management, U.S. Fish and Wildlife Service, and The Nature Conservancy inventories indicate that these and many more species of wildlife depend on the variety of habitat types and aquatic resources generated by the perennial stream in Hot Springs Canyon. This remote riparian ecosystem supports a broad array of wildlife species.

Hot Springs Canyon provides outstandingly remarkable habitat values for endangered and candidate wildlife species. The river, riparian vegetation and upland areas provides habitat used by three federally endangered species (bald eagle (*Haliaeetus leucocephalus*), peregrine falcon (*Falco peregrinus*), and the lesser long-nosed bat (*Leptonycteris curasoae yerbabuena*) and 12 federal candidate species (California leaf-nosed bat (*Macrotus californicus*), Mexican long-tongued bat (*Choeronycteris mexicana*), Ferruginous hawk (*Buteo regalis*), loggerhead shrike (*Lanius ludovicianus*), Chiricahua western harvest mouse (*Reithrodontomys megalotis arizonensis*), yellow-nosed cotton rat (*Sigmodon ochrogathus*), canyon (giant) spotted whiptail (*Cnemidophorus burti*), desert tortoise (sonoran population) (*Gopherus agassizii*), lowland leopard frog (*Rana yavapaiensis*), roundtail chub (*Gila robusta*), Sonora sucker (*Catostomus insignis*), desert sucker (*Catostomus clarkii*).

Special status species are known to utilize the Hot Springs Canyon study area include Costa's hummingbird (*Calypte costae*), northern beardless-tyrannulet (*Camptostoma imberbe*), willow flycatcher (*Epidonax traillii*), loggerhead shrike (*Lanius ludovicianus*), Arizona Bell's vireo

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(Vireo bellii arizonae), Desert bighorn sheep (Ovis canadensis). Hot Springs Canyon has the habitat characteristics necessary to make it a potential reintroduction site for 24 Endangered, Threatened or Candidate species.

Raptors such as the zone-tailed hawk (Buteo albonotatus), black hawk (Buteo anthracinus) and Northern gray hawk (Buteo nitidus maximus), a state candidate species, nest in and feed on resources linked to surface water flow in this area. The lowland leopard frog (Rana yavapaiensis), a state and federal candidate species, is also found in Hot Springs canyon.

The perennial waters of Hot Springs Canyon provide habitat for a variety of native fish species. Five native fish species, Gila chub (Gila intermedia), longfin dace (Agosia chrysogaster), speckled dace (Rhinichthys osculus), Sonora sucker (Catostomus insignis) and the Desert sucker (Catostomus clarki) represent one of the few remaining intact native fish communities in the state. The Gila chub (Gila intermedia), a federal candidate and state threatened species, is found in the lower section of this stream segment.

The Mexican garter snake (Thamnophis eques), a state candidate species, occurs primarily in permanent marshes and streams at middle elevations in central, southcentral, and southeastern Arizona including Hot Springs Canyon.

The gray hawk (Buteo nitidus), is a state threatened species that occurs in riparian deciduous forests in the San Pedro and Santa Cruz basins. One of the 55 nesting pairs known to exist in the United States has been observed in Hot Springs Canyon. The common blackhawk (Buteogallus anthracinus), is a state candidate species that nests along perennial streams with mature riparian deciduous forests in the southern half of Arizona. Hot Springs Canyon provides habitat for these hawks. The federal and state endangered peregrine falcon

(Falco peregrinus), has been observed in Hot Springs Canyon.

The yellow-billed cuckoo (Coccyzus americanus), a state threatened species, nests in Hot Springs Canyon. A state candidate species, the belted kingfisher (Ceryle alcyon), is restricted to permanent, fish inhabited waters such as those found in Hot Springs Canyon.

The tropical kingbird (Tyrannus melancholicus), found in Hot Springs Canyon is a state candidate species that nests in riparian forests of the Santa Cruz and San Pedro River basins. Bureau of Land Management and The Nature Conservancy inventories show that wildlife species such as mule deer (Odocoileus hemionus), white-tailed deer (Odocoileus virginianus), desert bighorn sheep (Ovis canadensis nelsonii), javelina (Pecari talacu), black bear (Euarctos americanus), mountain lion (Felis concolor), coatl (Nasua narica), numerous bird species as well as reptiles and amphibians have been found to utilize the riparian habitat in Hot Springs Canyon.

F. VEGETATION

The mixed broadleaf riparian plant community found in the canyon has been inventoried by Bureau of Land Management and The Nature Conservancy biologists and found to contain Fremont cottonwood (Populus fremontii), sycamore (Platanus wrightii), Velvet ash (Fraxinus velutina), Arizona walnut (Juglans major), Goodling Willow (Salix gooddingii), Bonpland willow (Salix bonplandiana) and a variety of shrubs, forbs and grasses.

This habitat forms an oasis, rich in diversity, in comparison to the uplands that surround it.

The watershed adjacent to Hot Springs Canyon consists of semidesert grasslands and mixed shrub.

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G. WATER RESOURCES

Bureau of Land Management inventories divide Hot Springs Canyon into two distinct hydrologic sections. The first section of the Hot Springs Canyon study area is intermittent and extends from the upstream end of the segment down to the confluence with Bass Canyon. The second section is perennial and extends from Bass Canyon downstream to the end of the segment.

Each section exhibits resources and values that are modified by the flow regime in the section.

Flow regimes in Hot Springs Canyon remain unaltered. There are no flow restrictions within the identified segment. The only existing impoundment of any significance on this watershed is Redus tank in upper Bass Canyon outside of the study area. The tank is approximately two-three acres in size and retains only a small fraction of the streamflow at that point in the watershed. There are no releases from this tank other than normal streamflow over the spillway after the tank is filled.

Since senior water rights are located downstream of the end of perennial flow in Hot Springs Canyon continued surface flow seems to be assured.

The Bureau of Land Management and The Nature Conservancy are operating under a cooperative monitoring agreement to monitor streamflow in Hot Springs, Bass, Redfield, and Wildcat Canyons for use in acquiring instream flow water rights for these streams through the State of Arizona Department of Water Resources.

The cooperative monitoring agreement specifies that two locations in the canyon are measured each month. Monthly measurements have been taken since 1989.

The Bureau of Land Management and The Nature Conservancy are pursuing the

acquisition of instream flow water rights for Hot Springs Canyon.

The application filed with the Arizona Department of Water Resources in 1988 identified beneficial uses of recreation, wildlife and fish. In 1993 the Arizona Department of Water Resources issued water right permit #33-94372.0000 to the Bureau of Land Management and The Nature Conservancy for two measurement points. The permit grants a median flow of 2.6 cubic feet per second at the lower measurement point and 2.4 cubic feet per second at the upper measurement point. These flows vary on a monthly basis and are identified in the justification document.

A shallow groundwater aquifer is found beneath the stream and supports surface flow in the canyon.

Water quality in the canyon has been monitored by the Bureau of Land Management from one to six times per year since 1987. Water quality is described as high and meets state standards for the full body contact designation. The Bureau of Land Management continues to collect samples for laboratory analysis.

H. LIVESTOCK GRAZING

Livestock use of this segment ended when The Nature Conservancy acquired the Muleshoe Ranch in 1982. When they acquired the ranch they also acquired the Bureau of Land Management grazing leases for approximately 19,000 acres of public land (allotment #4401) after a land exchange between Bureau of Land Management and the state blocked up public land around the ranch in 1986.

No livestock have been grazed on these lands since that time. Active grazing leases exist on the state lands and on some Forest Service lands in the upper watershed. No grazing is allowed in the Galluro Wilderness. In the early 1990s a local rancher applied for the unused

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grazing privileges on the Muleshoe allotment.

The Bureau of Land Management denied the application. The decision was successfully

challenged by the rancher. An appeal filed with the Interior Board of Land Appeals by Bureau of Land Management and The Nature Conservancy had not been resolved in 1993.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Hot Springs Canyon study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter 2 would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that

responsibility would be determined through assessments of instream flow needs.

7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

9. The mineral development scenario used in this document is one or two small mining explorations that don't reach production, employ fewer than five people and disturb fewer than five acres each.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

Under the recommended alternative the Hot Springs Canyon study area would not be recommended for designation and its outstandingly remarkable values would not receive special long-term legislative protection. These values will be administratively protected through the management of the Swamp Springs Hot Springs Watershed Area of Critical Environmental Concern.

The Safford District Resource Management Plan identified fish and wildlife as outstandingly remarkable in determining that Hot Springs Canyon is eligible for consideration as a wild and scenic river.

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Impacts on outstandingly Remarkable Fish Populations and Fish Habitat

The perennial waters of Hot Springs Canyon provide habitat for a variety of native fish species. The five native fish species (Gila chub, longfin dace, speckled dace, Sonora sucker, and the desert sucker represent one of the few remaining intact native fish communities in the state.

The five species found in this stream require a variety of aquatic habitat types that are defined by different water velocities, water depths, substrate types, light conditions and many other factors. Native fish communities in the Hot Springs Canyon can be impacted by the alteration or destruction of aquatic habitat, alteration in stream flow regimes, degradation of water quality and the introduction of exotic species that prey on and out compete the native species.

Changes in aquatic habitat types will have a direct and negative effect on the existence of some native fish species found in this stream. Activities or management actions that affect the factors responsible for habitat creation and maintenance will also impact native fish populations. Management actions that protect stream flow, water quality, channel stability, riparian vegetation and solitude will be beneficial to the native fish populations in this study area.

There would be no wild and scenic river management actions to protect outstandingly remarkable fish populations and fish habitats. Protection for the outstandingly remarkable fish population and fish habitat values would be supplied by the ongoing management activities described in Chapter II. For example, the Gila chub would be established as a priority species and manage habitat to maintain or increase population levels.

Since the mineral potential is low there is little probability of any impacts from major mining development. However, as the minerals

scenario indicates, one or two mining exploration activities may occur during the next 20 years. In a stream canyon the size of Hot Springs Canyon, with approximately 160 acres of riparian area, mining exploration that disturbs five to ten acres could cause adverse impacts to fish populations and habitat. The required plans of operations for mineral activities above casual use and no surface occupancy stipulations for leasable minerals will prevent serious impacts.

In accordance with the Swamp Springs-Hot Springs Area of Critical Environmental Concern management prescription the Bureau of Land Management will monitor stream flow on a monthly basis, water quality seasonally, and will manage impacts of livestock grazing through continued exclusion of the riparian area, or use of a seasonal grazing strategy that protects riparian vegetation.

Currently visitor use is low (1,700 to 1,800 annual visitors) and is expected to increase annually at a slow to moderate rate. There is no indication that current and expected levels of use are impacting fish populations and habitat. Since off-highway vehicle use is prohibited, no direct impacts would occur from off highway vehicles.

• Conclusion

The outstandingly remarkable fish populations and fish habitat values would not have long-term legislative protection from the Wild and Scenic Rivers Act. Administrative protection for the outstandingly remarkable fish population and fish habitat values would be provided by implementation of ongoing management actions under the recommended alternative.

Impacts on outstandingly Remarkable Wildlife Populations and Wildlife Habitat

This remote riparian ecosystem supports a broad array of wildlife species largely dependent on the riparian plant community species

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diversity, structural diversity and age class diversity of found here. The Hot Springs Canyon study area supports a number of state candidate species including the gray hawk, the lowland leopard frog, a state and federal candidate species, the Mexican garter snake, the tropical kingbird, and the common blackhawk. Another state candidate species, the belted kingfisher, is restricted to permanent, fish inhabited waters such as those found in Hot Springs Canyon.

The federal and state endangered peregrine falcon has been observed in Hot Springs Canyon. The yellow-billed cuckoo, a state threatened species, nests in Hot Springs Canyon. Other special status species that are known to utilize the Hot Springs Canyon study area include Costa's hummingbird, northern beardless-tyrannulet, willow flycatcher, loggerhead shrike, and Arizona Bell's vireo.

Wildlife species and habitat may be impacted by a variety of management actions. Habitat may be directly impacted by actions such as vegetation removal or alteration, water resource degradation, human presence and surface disturbing activities. It may be indirectly impacted by more subtle changes in the hydrologic conditions in the watershed and upstream land uses.

Some species are impacted by the relative amount of human use of the area that can result in direct disturbance. Solitude is an integral parameter of habitat quality. The gray hawk is a state threatened species that occurs in riparian deciduous forests in the San Pedro and Santa Cruz basins. One of the 55 nesting pairs known to exist in the United States has been observed in Hot Springs Canyon.

There would be no wild and scenic river management actions to protect outstandingly remarkable wildlife populations and wildlife habitats. Protection for the outstandingly remarkable wildlife population and habitat values would be supplied by the ongoing

management activities described in Chapter II. For example, in accordance with the Swamp Springs-Hot Springs Area of Critical Environmental Concern management prescription the Bureau of Land Management will establish the gray hawk as a priority species and manage habitat to maintain or increase population levels.

Visitor use is low (1,700 to 1,800 annual visitor use days) and is expected increase at a slow to moderate rate. There is no indication that current or expected levels of use will impact wildlife populations or habitat. Since off-highway vehicle use is prohibited, no direct impacts to wildlife populations or habitat would occur from off-highway vehicles.

The acquisition of private lands on a willing seller-willing buyer basis or by exchange will provide protection to the outstandingly remarkable wildlife populations and wildlife habitat values.

Since the mineral potential is low there is little probability of adverse impacts from any major mining development. However, as the minerals scenario indicates, one or two mining exploration activities may occur the next 20 years. In a stream canyon the size of Hot Springs, with approximately 160 acres of riparian area, mining exploration that disturbs five to ten acres could cause adverse impacts to sensitive wildlife populations and habitat. The required plans of operations and the no surface occupancy stipulations for leasable minerals would prevent serious impacts.

• Conclusion

The outstandingly remarkable wildlife populations and wildlife habitat values would not have long-term legislative protection from the Wild and Scenic Rivers Act. Administrative protection for the outstandingly remarkable wildlife population and wildlife habitat values would be provided by implementation of ongoing management actions under the

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recommended alternative.

Impacts on Mineral Development

There are no existing mining operations in Hot Springs Canyon. The potential for mineral resources is not considered high. An evaluation completed in 1987 states that there are no identified mineral resources in the area nor are there indications of undiscovered resources (Summary of Mineral and Mineral Resource Potential of the Galluro Addition Wilderness Study Area (AZ-040-081), Graham County, Arizona, William J. Keith, U.S. Geological Survey and Terry J. Kreidler, U.S. Bureau of Mines). Another study Mineral Land Assessment MLA-43-88 conducted in 1988 by Russel A. Schreiner of the U.S. Department of Interior Bureau of Mines addresses the Muleshoe area and confirms the lack of mineral resources within the Hot Springs Canyon study area.

The Hot Springs Canyon study area will remain open to mineral entry. Approved plans of operation are required for all locatable minerals activities above casual use in the Swamp Springs-Hot Springs Area of Critical Environmental Concern. A no surface occupancy stipulation for leasable minerals is required in the riparian area.

Although under the minerals development scenario one or two small mining explorations would occur, there is little likelihood that sufficient quantities of minerals would be retrieved to reach the production phase.

• Conclusion

Since mineral entry would remain open in the Hot Springs Canyon study area there would be no adverse impacts to minerals development.

Impacts on Recreation

An estimated 1,700 to 1,800 visitors per year access the Muleshoe area through Hooker Hot Springs near the upper end of the Hot Springs

Canyon study area. This represents an increase of 300 to 500 visitors over a similar time period in 1991-1992. An unknown number of visitors access Hot Springs Canyon by driving up the normally dry lower canyon.

No fishing opportunities exist in the canyon due to the lack of game fish in this stream. The riparian area of Hot Springs Canyon is closed to off-highway vehicle use in the Safford District Resource Management Plan.

The Nature Conservancy controls access to the canyon above the segment under consideration and prohibits off-highway vehicle access. The study area will be managed for dispersed recreation. This includes hiking, hunting, picnicking, bird watching and camping.

• Conclusion

Implementation of the recommended alternative provides a variety of recreational experiences for visitors and will have no adverse impacts on recreation.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Hot Springs Canyon study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints

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associated with the Swamp Springs-Hot Springs Area of Critical Environmental Concern, Redfield Canyon Wilderness Area, and Muleshoe Ranch Ecosystem Management Area.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative mineral entry would be allowed, and resource management activities would be subject to the Swamp Springs-Hot Springs Area of Critical Environmental Concern Management Plans.

Areas of critical environmental concern are created by administrative decisions and subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the Swamp Springs-Hot Springs Area of Critical Environmental Concern Management Plan.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

Impacts on the Outstandingly Remarkable Values

The Safford District Resource Management Plan identified fish and wildlife as outstandingly remarkable in determining that Hot Springs Canyon is eligible for consideration as a wild and scenic river.

Under the all suitable alternative the Hot Springs Canyon study segment would be determined suitable and recommended for designation under a Wild classification. Its outstandingly remarkable values would receive special long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly Remarkable Fish Populations and Fish Habitat

The perennial waters of Hot Springs Canyon provide habitat for a variety of native fish species. The five native fish species (Gila chub, longfin dace, speckled dace, Sonora sucker, and the desert sucker represent one of the few remaining intact native fish communities in the state.

The five species found in this stream require a variety of aquatic habitat types that are defined by different water velocities, water depths, substrate types, light conditions and many other factors. Native fish communities in the Hot Springs Canyon can be impacted by the alteration or destruction of aquatic habitat, alteration in stream flow regimes, degradation of water quality and the introduction of exotic species that prey on and out compete the native species. Changes in aquatic habitat types will have a direct and negative effect on the existence of some native fish species found in this stream.

Wild and scenic river management of the Wild river would prohibit new flood control dams, levees, or other works. All water supply dams and major diversions would be prohibited. This would ensure long-term protection for the outstandingly remarkable fish populations and fish habitat values on the 1,600 acres of public lands in the study area.

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Construction of new roads or trails for motorized travel would be prohibited. This also would ensure long-term protection for the outstandingly remarkable fish populations and fish habitat values on the 1,600 acres of public lands in the study area.

Currently there are no existing mining operations or valid claims in Hot Springs Canyon. Under the all suitable alternative the Hot Springs Canyon study area would be closed to mineral entry as a Wild river. This would eliminate any future adverse impacts from minerals development and ensure protection for the outstandingly remarkable fish populations and fish habitat.

Additional protection for the outstandingly remarkable fish population and fish habitat values would be supplied by the ongoing management activities described in Chapter II.

Activities or management actions that affect the factors responsible for habitat creation and maintenance will also impact native fish populations. Management actions that protect stream flow, water quality, channel stability, riparian vegetation and solitude will be beneficial to the native fish populations in this Hot Springs Canyon study area.

Visitor use is low (1,700 to 1,800 annual visitor use days) and is expected to increase at a moderate rate. There are no indications that this increase will have negative impacts on fish populations or habitat.

Off-highway vehicle use is prohibited. No direct impacts to populations or habitat will occur.

The acquisition of private lands on a willing seller-willing buyer basis or by exchange will provide protection to an additional 320 acres of the outstandingly remarkable fish and fish habitat values.

• Conclusion

The outstandingly remarkable fish populations and fish habitat values would have long-term legislative protection under the Wild and Scenic Rivers Act. Administrative protection for the outstandingly remarkable fish population and fish habitat values would be provided by implementation of ongoing management actions under the all suitable alternative.

Impacts on outstandingly Remarkable Wildlife Populations and Wildlife Habitat

This remote riparian ecosystem supports a broad array of wildlife species largely dependent on the riparian plant community species diversity, structural diversity and age class diversity of found here. The study area supports a number of state candidate species including the gray hawk, the lowland leopard frog, a state and federal candidate species, the Mexican garter snake, the tropical kingbird, and the common blackhawk. Another state candidate species, the belted kingfisher, is restricted to permanent, fish inhabited waters such as those found in Hot Springs Canyon.

The federal and state endangered peregrine falcon has been observed in Hot Springs Canyon. The yellow-billed cuckoo, a state threatened species, nests in Hot Springs Canyon. Other special status species that are known to utilize the Hot Springs Canyon study area include Costa's hummingbird, northern beardless-tyrannulet, willow flycatcher, loggerhead shrike, and Arizona Bell's vireo.

Wild and scenic river management of the Wild river would prohibit new flood control dams, levees, or other works. All water supply dams and major diversions would be prohibited. This would ensure long-term protection for the outstandingly remarkable wildlife populations and wildlife habitat values on the 1,600 acres of public lands in the study area.

Construction of new roads or trails for

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motorized travel would be prohibited. This also would ensure long-term protection for the outstandingly remarkable wildlife populations and wildlife habitat values on the 1,600 acres of public lands in the study area.

Currently there are no existing mining operations in Hot Springs Canyon. Under the all suitable alternative the study area would be closed to mineral entry. This would eliminate any future adverse impacts from minerals development and ensure protection for the outstandingly remarkable wildlife populations and wildlife habitat.

Additional protection for the outstandingly remarkable wildlife population and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II.

There are no existing mining operations or valid claims in Hot Springs Canyon.

Under the all suitable alternative the Hot Springs Canyon study area would be closed to mineral entry. This would eliminate any adverse impacts from minerals development. In accordance with the Swamp Springs-Hot Springs Area of Critical Environmental Concern the Bureau of Land Management would establish the gray hawk as a priority species and manage habitat to maintain or increase population levels.

Visitor use is low (1,700 to 1,800 annual visitor use days) and is expected to increase at a moderate rate. National recognition of the area brought about by designation will likely to accelerate the rate of visitation increase. There is no evidence this would impact wildlife or habitat in the short term. In the long term it may be necessary to control the number of visitors to the Hot Springs Canyon study area to prevent adverse impacts.

Off-highway vehicle use is prohibited. No adverse impacts to wildlife or habitat will occur.

The acquisition of private lands on a willing seller-willing buyer basis or by exchange will provide protection to an additional 320 acres of the outstandingly remarkable wildlife populations and wildlife habitat values.

Implementation of the all suitable alternative will have no direct adverse impacts on the outstandingly remarkable wildlife populations and wildlife habitat of Hot Springs Canyon.

• Conclusion

The outstandingly remarkable wildlife populations and wildlife habitat values would have long-term legislative protection under the Wild and Scenic Rivers Act. Administrative protection for the outstandingly remarkable wildlife population and wildlife habitat values would be provided by implementation of ongoing management actions under the all suitable alternative.

Impacts on Mineral Development

There are no existing Mining operations or valid claims in Hot Springs Canyon. A U.S. Geological Survey and U.S. Bureau of Mines study concludes that there is no potential for undiscovered mineral resources in this area.

This finding is confirmed by another U.S. Bureau of mines report, MLA 43-88, completed in 1988.

Mining activities can be impacted by land use decisions that limit access, utility right of ways, and surface disturbance.

Under the all suitable alternative the Hot Springs Canyon study area would be withdrawn from mineral entry and mineral leasing by designation as a Wild and Scenic River with a Wild classification.

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• Conclusion

Implementation of the all suitable alternative would prohibit future mining development. However, since the region is of low potential the impact on mineral development would be minor.

Impacts on Recreation

An estimated 1700 to 1800 visitors per year access the muleshoe area through Hooker Hot Springs near the upper end of the study area. This represents an increase of 300 to 500 visitors over a similar time period in 1991-1992. An unknown number of visitors access Hot Springs Canyon by driving across state land in the normally dry lower canyon. No fishing opportunities exist in the canyon due to the lack of game fish inhabiting the stream.

National recognition of the area brought about by designation of the stream as a Wild River in the National Wild and Scenic Rivers System would lead to a moderate rate of increase in visitation to the area.

Management actions under the all suitable alternative would prohibit construction of new roads or trails for motorized travel. Motorized use also would be restricted in the Wild river area (exceptions could be for search and rescue and other emergency situations).

Management actions under the all suitable alternative would prohibit the construction of campgrounds, interpretive centers, or administrative headquarters in the river corridor.

Recreation use would be encouraged in Wild river areas but public use and access could be regulated.

Additional effects on recreation activities would be supplied by the ongoing management activities described in Chapter II. For example, the riparian area of Hot Springs Canyon is closed to off-highway vehicle use by the Safford District Resource Management Plan. The Nature Conservancy controls access to the canyon above the segment under consideration, and prohibits off-highway vehicle access.

The Hot Springs Canyon study area will be managed as an extensive recreation management area for dispersed recreation. This includes activities such as hiking, hunting, picnicking, bird watching, and camping.

Implementation of the all suitable alternative would provide a variety of recreational opportunities for visitors to the area and will have no adverse impacts on recreation.

• Conclusion

There would be no adverse impacts to tourism from implementation of the all suitable alternative. Increased visitor use of the area will be slightly beneficial to the state tourism industry by attracting out of state visitors to the area.

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Hot Springs Canyon Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that Hot Springs Canyon was eligible for further wild and scenic river study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Gila Resource Area Office, Safford, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Hot Springs Wild and Scenic Study Area were held in Winkelman April 12, with nearly a dozen people attending, in Tucson on April 13 attended by 35-40 people, and in Benson April 15 where about 10 signed the register.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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Members of the Review Group reviewed the document for consistency. They are:

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P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermillion Resource Area.

B. Smith, Renewable Resources Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

HOT SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

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**GILA BOX: LOWER SAN FRANCISCO RIVER
WILD AND SCENIC RIVER STUDY AREA**

**GILA RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



**GILA BOX: LOWER SAN FRANCISCO RIVER
WILD AND SCENIC RIVER STUDY AREA**

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GILA BOX: LOWER SAN FRANCISCO WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Gila Box: Lower San Francisco River were identified in the Safford District Resource Management Plan (1993) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine whether these portions of the Gila Box: Lower San Francisco River should be recommended to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Gila Box: Lower San Francisco River Wild and Scenic River study area is in southeastern Arizona thirty miles northeast of Safford and two miles south of Clifton. The two segments of the Gila Box: Lower San Francisco River study area are 8 miles long, extending from the NW1/4 Sec.7 T.5S. R.30E. to the confluence with the Gila River.

The Lower San Francisco River lies within the Basin and Range Physiographic Province in a transition zone between the Sonoran and Chihuahuan biotic communities. Consequently, the study area is characterized by high biological diversity. This river drains approximately 2,766 square miles of eastern Arizona and western New Mexico. The elevation ranges from 3,300 feet at the confluence with the Gila River to 3,450 near the upstream end of the study area.

Two segments were determined to be eligible in the Safford District Resource Management Plan because they are free flowing and have outstandingly remarkable scenic, fish, wildlife, recreation, hydrologic and geologic values. **(The 1993 suitability assessment focussed on two outstanding remarkable values of the lower San Francisco River: recreation and hydrologic values.)**

The two segments are identified in the Safford District Resource Management Plan as segments 4 and 5 of the Gila Box study area.

The upper segment, segment 1 (segment 5 in the Safford District Resource Management Plan, T.5S., R.30E., Sec. 7, NW1/4 to T.5S., R.29E., Sec 14, SW1/4) flows across 3.3 miles of public and 1.7 miles of private land on the upstream end of the study area. This segment includes about 1,130 acres of public land and 205 acres of private land.

Segment 1 is readily accessible by three roads: two jeep trails and the road from Morenci to the Phelps-Dodge picnic area portion of the segment. This segment was classified as Recreational in the Safford District Resource Management Plan.

Segment 2 (segment 4 in the Safford District Resource Management Plan, T.5S., R.29E., Sec. 14, SW1/4 to T.5S., R.29E., Sec 21, SE1/4, confluence with the Gila River), flows across 2.9 miles of public land and 0.1 mile of private land. This segment includes about 740 acres of public land and 390 acres of private land.

This segment is free of impoundments and is generally inaccessible except by trails. The shoreline is primitive and undeveloped. This segment was classified as Wild in the Safford District Resource Management Plan.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE LSF-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

LOWER SAN FRANCISCO RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	6.2	0	1.8	8.0
PERCENT	77.5	0	22.5	100.0
TOTAL ACRES	1,871	0	593	2,464
PERCENT	76	0	24	100.0
SUBSURFACE MINERALS ACRES	1,871	0	593	2,464

B. INTERRELATIONSHIPS

1. Bureau of Land Management

The downstream 1/8 mile (40 acres) of the Lower segment is within the boundary of the Gila Box Riparian National Conservation Area.

2. Federal agencies

The U.S. Forest Service manages the majority of the upper watershed in Arizona and New Mexico. These areas are managed by the Apache Sitgreaves and Gila National Forests.

**TABLE LSF-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE GILA BOX:
SAN FRANCISCO WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

GILA BOX: SAN FRANCISCO RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Gila Box Riparian National Conservation Area	40	2.0

3. State

The San Francisco River flows across private and state lands and public land administered by the U.S. Forest Service and the Bureau of Land Management. The Bureau of Land Management has filed an application with the Arizona Department of Water Resources for an instream flow water right, requesting 10 CFS year-round.

4. County

The study area is located in Greenlee County.

5. Private

The Phelps Dodge Corporation owns a private parcel of land in both the upper and Lower segment. The parcel in the upper segment has been identified for acquisition by the Bureau of Land Management.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

C. SCOPING

Scoping meetings specifically highlighting the Gila Box: Lower San Francisco River study area were held in Tucson, April 13, 1993, Phoenix on April 14, 1993, Clifton April 19, 1993, and Safford, April 20, 1993. Approximately 35 to 40 attended the Tucson meeting, fifty-five to 60 people attended the Phoenix meeting, and about 50 attended each meeting in Clifton and Safford.

The issues identified concern the impacts of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on water rights
- Impacts to anticipated water rights transfers by Phelps Dodge Corporation.
- Impacts of dual riparian national conservation area and wild and scenic river designation
- Impacts to federal agencies (cost of management),
- Need to make the evaluation and designation process more open to the public
- Impacts on existing water diversions and developments
- Need process to remove rivers from the list
- Impact on potential commercial and residential development in towns and cities
- Impacts on the future development of dams for flood control or water storage
- Impacts on property values
- Impacts on tourism
- Impacts to private property base
- Economic impacts of designation
- Impacts on the expansion of the Greenlee County airport
- Impacts on new uses of the public land
- Impacts to outstandingly remarkable scenic and geologic values

- Impacts to outstandingly remarkable recreational values
- Impacts to outstandingly remarkable fish and wildlife habitat values
- Impacts to outstandingly remarkable hydrologic values
- Impacts on mineral development
- Impacts on grazing

Issues Considered but not Addressed

- Impacts on water rights

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

A federal reserved water right was acquired for the portion (1/8 mile) of the San Francisco River designated as the Gila Box Riparian National Conservation Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right is on-going and the Bureau of Land

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

Management will submit notification to the State of Arizona.

The Bureau of Land Management has filed an application for an instream flow water right requesting 10 cfs year round with the Arizona Department of Water Resources.

This issue will not be discussed further.

- Impacts to anticipated water rights transfers by Phelps Dodge Corporation.

In the next 20 years it is anticipated that Phelps Dodge Corporation will transfer the point of diversion of their water rights on Eagle Creek, the San Francisco River and the upper Gila River from upstream of the study area to a downstream location in the Safford Valley for use in the Dos Pobres and Lone Star mines. Later Phelps Dodge may move the point of diversion back upstream of the study area. These water rights are for 52,600 acre feet per year (72.6 cubic feet per second). A portion of this water will flow through the Gila Box: Lower San Francisco River study area.

Bureau of Land Management hydrologists and resource specialists do not believe that the addition or deletion of this amount of water will have significant impacts on the outstandingly remarkable values of the study area.

This issue will not be discussed further.

- Impacts on existing water diversions and developments.

Since there are no existing water diversions or developments within the river study area there will be no impacts on them. The upstream diversions and developments already in place outside the study area beyond federal jurisdiction.

This issue will not be discussed further.

- Impacts on the future development of dams

for flood control or water storage.

In 1962, Congress authorized construction of the Camelsback Dam and Reservoir. The proposed location is on the Gila River below the study area. If Camelsback Dam were constructed, the reservoir would inundate the Lower San Francisco River study area. For many years, an application to withdraw lands for construction of the dam and reservoir was pending, awaiting funding of the project. That application expired in 1991.

When Congress designated the Gila Box Riparian National Conservation Area, the area was withdrawn from appropriation and entry under the public land, mining, and mineral leasing laws. With closure of the lands to entry and appropriation, future application for withdrawal of lands for construction of the dam and reservoir is no longer possible. It is not expected that Camelsback Dam will be constructed in the foreseeable future.

No main channel dam construction is anticipated on the San Francisco River in the foreseeable future in the study area. Camelsback Dam has been effectively precluded by designation of the Gila Box Riparian National Conservation Area. It is difficult to project if dams will be constructed at Quail Springs on the San Francisco River above Clifton or on Pigeon Creek, a tributary of the Blue River on the Apache Sitgreaves National Forest north of Clifton. Flood control levees planned for the San Francisco River upstream of the study area in Clifton are not expected to impact stream flow in the lower river. Designation of the Gila Box: Lower San Francisco River will not preclude the construction of these dams outside of the study area.

No construction of other diversions or structures is anticipated in the study area in the foreseeable future.

This issue will not be discussed further.

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- impacts to Federal agencies (cost of management),

The Wild and Scenic Rivers Act requires that all eligible rivers be considered for inclusion in the National Wild and Scenic Rivers System. Wild and scenic river management costs were estimated for specific study areas in the suitability assessment and will be estimated if management plans are developed for designated rivers.

This issue will not be considered further.

- impacts of dual riparian national conservation area and wild and scenic river designation

There are no environmental impacts from dual management designation since the management actions would always comply with the most stringent requirements. The only portion of the San Francisco River affected by potential dual designation is the lower 1/8 mile.

This issue will not be discussed further.

- impacts to private property base.

Acquisition of nonfederal land with high resource values including riparian is a management objective in the Safford District Resource Management Plan. This plan has undergone thorough public review. A total of 593 acres in the study area is identified for acquisition.

The Safford District Resource Management Plan identifies more public land in Greenlee County for disposal than private land for acquisition. No additional land in the study area will be identified for acquisition if the Gila River is designated under the Wild and Scenic Rivers Act. The acquisition of 593 acres of nonfederal land in the study area will not result in a significant impact to the private property base in Greenlee County.

The acquisition process would only move forward and be completed on a willing seller-willing buyer basis.

The issue of impacts on the private property base will not be discussed further.

- Need to make the evaluation and designation process more open to the public.

The Bureau of Land Management has rigorously followed appropriate requirements in its scoping and public review processes for wild and scenic river eligibility determination and suitability recommendation.

The process encourages public input and is described in detail in the sections on scoping and public involvement in this document.

This issue will not be discussed further.

- Need process to remove rivers from the list.

Congress designates rivers into the National Wild and Scenic Rivers System. Congress also would have the authority to remove rivers from this list.

This issue will not be discussed further.

- Impacts on tourism.

Visitor use of the Gila Box: Lower San Francisco River study area is affected by visitation to the nearby Gila Box. Upward trends in recent visitor use in the Gila Box, proposed development of new recreation sites, proposed improvements in access to the area, increased public awareness of the area associated with designation of the Gila Box Riparian National Conservation Area and a potential wild and scenic river designation lead Bureau of Land Management specialists to conclude a moderate increase in visitor use of the area can be expected in foreseeable future.

However, by itself the wild and scenic river

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designation is not expected to lead to a substantial increase in tourism.

This issue will not be discussed further.

- impacts on property values.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There are no impacts expected on private property values or uses from implementation of the alternatives.

- economic impacts of designation.

Congressional action to designate or not designate wild and scenic Rivers would have no direct impacts on potential commercial, agricultural, or residential development in towns and cities.

The Bureau of Land Management has no authority over nonfederal land and only can address the public land it administers. In wild and scenic River administration the management protection would be applied to the entire river study area except for private or State lands.

Congressional action to include the Gila Box: Lower San Francisco River in the National Wild and Scenic Rivers System would not affect the use of private property. Designation does not open private lands to public access. The right to buy and sell property will not be affected.

- Impacts on new uses of the public land.

Congressional designation of the river would be followed by the development of a river management plan in developed in compliance with the National Environmental Policy Act. The management plan will be developed within three years after Congressional designation and will address resource protection, development of lands and facilities, use capacities, and other management practices within the designated corridor that are necessary or desirable to achieve the purposes of the Wild and Scenic Rivers Act.

All new uses of the public land within the designated corridor would comply with the approved plan.

- Impact on potential commercial and residential development in towns and cities.

Congressional action to designate or not designate wild and scenic rivers would have no direct impacts on potential commercial, agricultural, or residential development in towns and cities. Implementation of the alternatives is not expected to change current commercial and residential conditions.

The Bureau of Land Management has no authority over nonfederal land and only can address the public land it administers. In wild and scenic River administration the management protection would be applied to the entire river study area except for private or State lands.

Congressional action to include the Gila Box: Lower San Francisco River in the National Wild and Scenic Rivers System would not affect the use of private property. Designation does not open private lands to public access. The right to buy and sell property will not be affected.

This issue will not be discussed further.

- impacts on the expansion of the Greenlee County airport.

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The expansion of Greenlee County to include landings by commercial jet aircraft is not expected to be impacted by Wild and Scenic River Designation. The number of flights is expected to be limited to a few each week and the approach to the airport may or may not cross the study area at low elevation. This level of activity is not considered to be inconsistent with designation.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic River designation or the area being returned to multiple use management.

The following alternatives are analyzed:

Recommended alternative
All suitable
No action/not suitable

B. RECOMMENDED ALTERNATIVE

Under the recommended alternative, two segments totaling 6.4 miles of the Gila Box: Lower San Francisco River are determined to be suitable and are recommended for inclusion in the National Wild and Scenic Rivers System.

The upper boundary of the proposed river area would begin at the 230 kV power line right-of-way at the lower end of the Phelps Dodge picnic area in T.5S., R.29E., Sec.12 SE1/4. The lower 3.4 miles of segment 1, and the entire 3 miles of segment 2, are recommended suitable for designation under a Recreational classification.

The upper 1.6 miles of segment 1 of the study area would be recommended as nonsuitable.

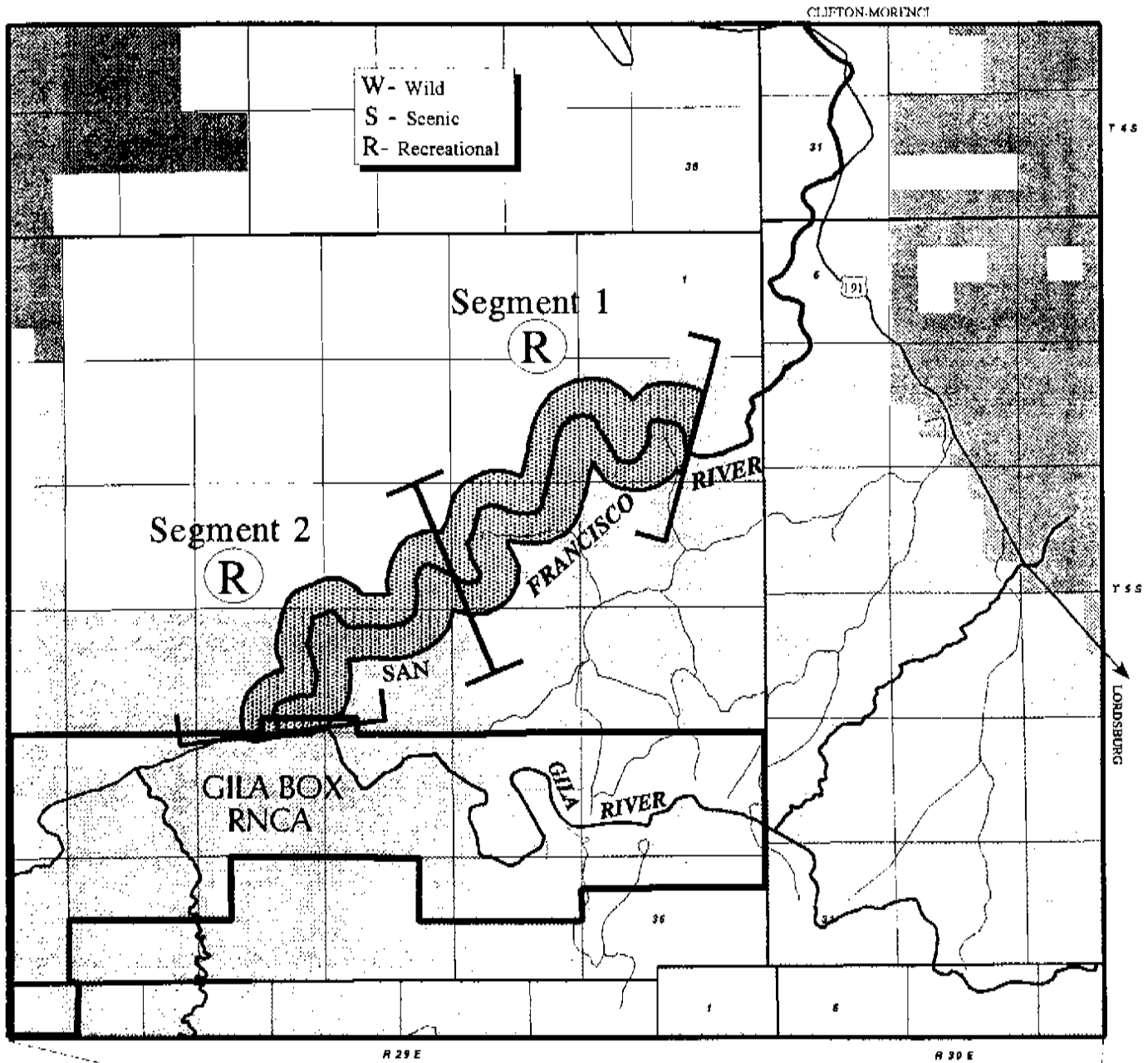
Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur in the implementation of the recommended alternative determining portions of segments 1 and 2 of the Gila Box: Lower San Francisco River suitable for a Recreational classification. Where wild and scenic river management actions overlap ongoing management actions, the more restrictive would apply.

- New mining claims would be allowed and existing operations could continue. Reasonable mining claim and mineral lease access would be permitted.
- Mining claims could be patented only as to the mineral estate.
- Water quality would be maintained or improved to meet Arizona State standards.
- New hydroelectric power facilities would be prohibited.
- Existing low dams, diversion works, rip rap, and other minor structures would be permitted.
- Construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment would be prohibited.
- New waterway structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
- Existing parallel roads would be maintained.

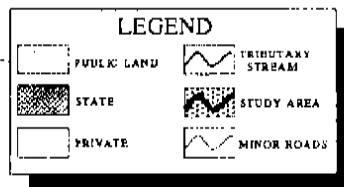
LOWER SAN FRANCISCO RIVER

(Recommended Alternative)



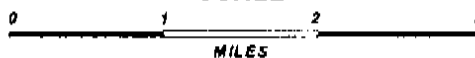
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

October 1994



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SCALE



GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

- Motorized travel would be permitted.
- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreation use would be encouraged but public use and access may be regulated and distributed to protect and enhance recreational river values.
- New minor structures for fish and wildlife habitat protection would be permitted.
- New rights-of-ways, transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- Instream flow would be quantified. An assessment would be developed in order to secure instream flows associated with protecting the outstandingly remarkable values.
- Existing rights of ways will remain in place. New rights of ways are discouraged but may be approved. Impacts to river values must be minimized.
- The study area will be managed as an extensive recreation management area for dispersed recreation.
- Off highway vehicles will be limited to existing roads and trails in portions of the study area outside the Gila Box Riparian National Conservation Area. They will be limited to designated roads within the conservation area.
- Priority species and their habitat will be managed to maintain or enhance population levels.
- The study area will be inventoried and monitored to determine and track priority species populations.
- Riparian vegetation will be managed to meet Bureau goals of having 75 percent of its riparian areas in functioning condition and an advanced ecological status by 1997.

Ongoing management actions

Ongoing management actions in the Gila Box: Lower San Francisco River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Safford District Resource Management Plan and Gila Box Riparian National Conservation Area plan.

- Surface occupancy for leasable minerals and sale of mineral materials such as sand and gravel is prohibited within the riparian area.
- Access will be allowed on existing roads and trails in the area. New road construction is allowed within the designated river corridor.
- 593 acres of private land are identified for acquisition. Private land identified for acquisition will be obtained on a willing buyer willing seller basis.
- Upland vegetation will be managed under the desired plant community concept.
- Habitat impacts from grazing will be reduced through a combination of exclusion areas and seasonal grazing systems designed to reduce impacts on the riparian areas.
- The Bureau of Land Management has applied for an instream flow water right of 10 cubic feet per second with the state of Arizona.
- A federal reserved water right was acquired for the lower 1/8 mile of the river that is in the Gila Box Riparian National Conservation Area by the Arizona Desert Wilderness Act of 1990. Water rights quantification is on-going through the state appropriative process.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

- Six miles of riparian pasture fence will be constructed along the river; the riparian pasture will be created out of parts of both allotments, and managed as part of the Smuggler Peak Allotment.
- Water sources have been developed on the uplands to reduce dependency on water in the river.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative, determines segment 1 (segment 5 in the Safford District Resource Management Plan) to be suitable for recommendation for designation as Recreational and segment 2 (segment 4 in the Safford District Resource Management Plan) suitable for recommendation as Wild.

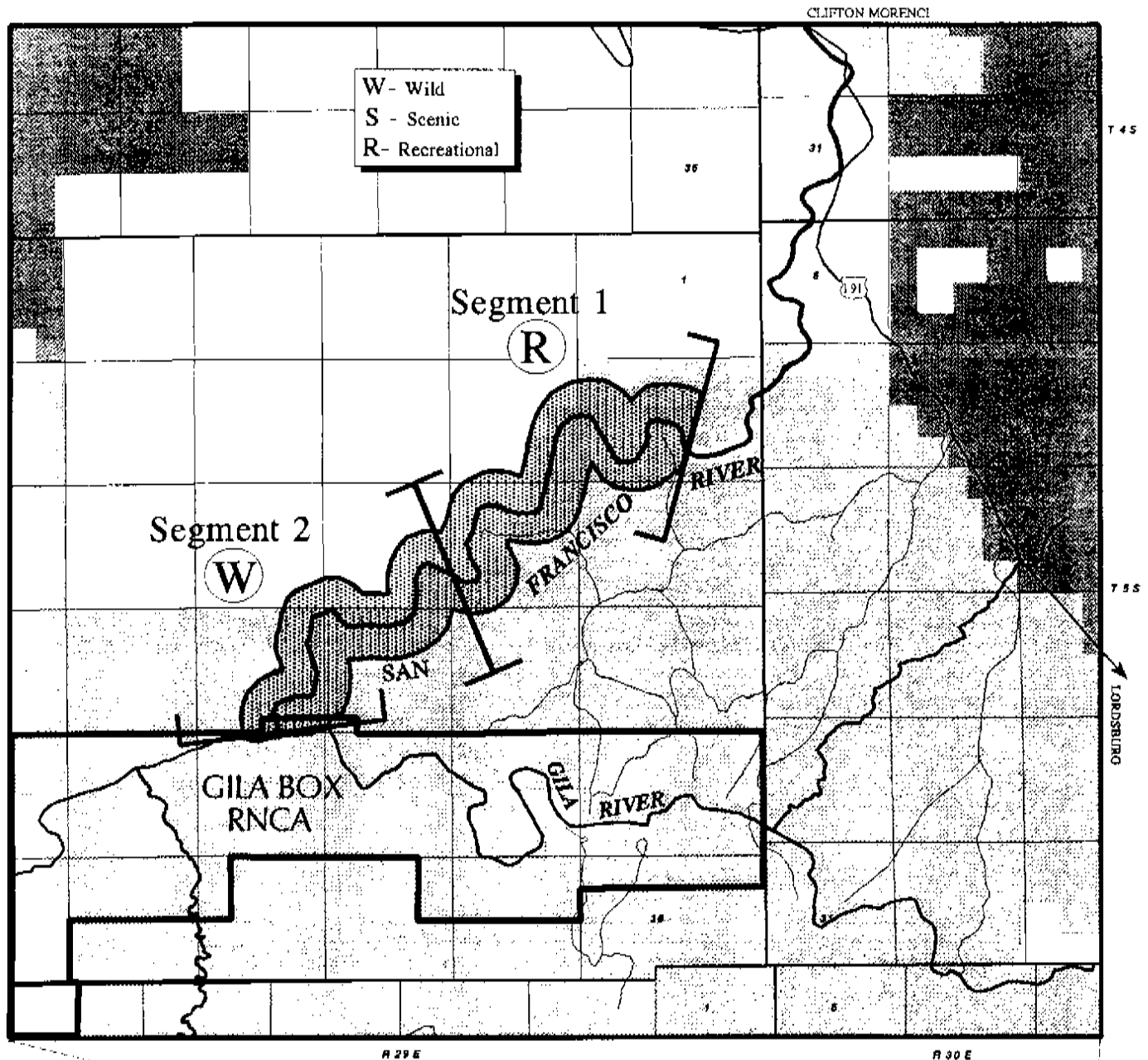
Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur in the implementation of the all suitable alternative recommending segment 1 as a Recreational River and segment 2 as Wild. Where wild and scenic River management actions overlap ongoing management actions, the more restrictive would apply.

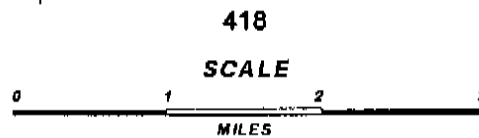
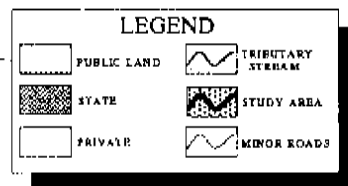
- Upon designation the Wild segment would be withdrawn from mineral entry and new mining claims and mineral leases would be prohibited. In the Recreational segment new mining claims and mineral leases would be allowed.
- Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- New mining claims would be restricted to patents on the mineral estate.
- Water quality would be maintained or improved.
- Hydroelectric power facilities would be prohibited.
- New flood control dams, levees, or other works would be prohibited.
- Construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment would be prohibited.
- All water supply dams and major diversions would be prohibited.
- Construction of new roads or trails for motorized travel would be prohibited in the Wild segment. In the Recreational segment roads or trails would be allowed.
- Normally, motorized use would be restricted in a Wild river area. Exceptions could be for search and rescue and other emergency situations. In the Recreational segment motorized travel would be permitted if there was no impairment of outstandingly remarkable values.
- Campgrounds, interpretive centers, or administrative headquarters within the river corridor would be prohibited in the Wild segment. In the Recreational segment moderate-sized campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged in Wild river areas but public use and access could be regulated.

LOWER SAN FRANCISCO RIVER

(All Suitable Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA
October 1994



GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

- Woodcutting would not be permitted except when needed to clear trails, for visitor safety or to control fire in the Wild segment. In the Recreational segment wood cutting would be allowed. Cutting of dead and down wood would be limited.
- Livestock grazing use would be restricted to current levels.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of way.
- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable applicable values.

Ongoing management actions

Ongoing management actions in the Gila Box: Lower San Francisco River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Safford District Resource Management Plan and Gila Box Riparian National Conservation Area plan.

- Surface occupancy for leasable minerals and sale of mineral materials such as sand and gravel is prohibited within the riparian area.
 - Reasonable access to existing claims and operations are allowed.
 - Access will be allowed on existing roads and trails in the area.
 - 593 acres of private land is identified for acquisition; private land identified for acquisition will be obtained on a willing buyer willing seller basis.
 - Existing rights-of-way will remain in place.
- New rights-of-way are discouraged but may be approved. Impacts to river values must be minimized.
- The study area will be managed as an extensive recreation management area for dispersed recreation.
 - Off highway vehicles will be limited to existing roads and trails.
 - Sandrail (off highway vehicle) use of the river corridor will be allowed to continue outside of the Gila Box Riparian National Conservation Area.
 - Priority species and their habitat will be managed to maintain or enhance population levels.
 - The study area will be inventoried and monitored to determine and track priority species populations.
 - Riparian vegetation will be managed to meet Bureau goals of having 75 percent of its riparian areas in functioning condition and an advanced ecological status by 1997.
 - Upland vegetation will be managed under the desired plant community concept.
 - Habitat impacts from grazing will be reduced through a combination of exclusion areas and seasonal grazing systems designed to reduce impacts on the riparian areas.
 - The Bureau of Land Management has applied for an instream flow water right of 10 cubic feet per second (cfs) with the state of Arizona.
 - A federal reserved water right was acquired for the lower 1/8 mile of the river that is within the Gila Box Riparian National Conservation Area by the Arizona Desert Wilderness Act of 1990. Water rights quantification is on-going through the state appropriate process.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

- Six miles of riparian pasture fence will be constructed along the river; The riparian pasture will be created out of parts of both allotments, and managed as part of the Smuggler Peak Allotment.
- Water sources have been developed on the uplands to reduce dependency on water in the river.

D. NO ACTION/NOT SUITABLE ALTERNATIVE

The no action/not suitable alternative determines the entire Gila Box: Lower San Francisco River study area to be nonsuitable and does not recommend designation. Implementation of the no action/not suitable alternative would rescind any protective status associated with the eligibility findings, and place the river area under ongoing management prescriptions.

Wild and Scenic River management actions

The no action/not suitable alternative determines the entire Gila Box: Lower San Francisco River study area to be nonsuitable. No wild and scenic river management actions would occur under this alternative.

Ongoing management actions

- The study area will remain open to mineral entry.
- Surface patent of mining claims will be allowed in the study area.
- Surface occupancy for leasable minerals and sale of mineral materials such as sand and gravel is prohibited within the riparian area.
- Access will be allowed on existing roads and trails in the area.

- 593 acres of private land are identified for acquisition; private land identified for acquisition will be obtained on a willing buyer willing seller basis.

- Existing rights of ways will remain in place. Use of existing rights of ways corridors is encouraged for new utilities. New rights of ways will be considered on a case by case basis.

- The study area will be managed as an extensive recreation management area for dispersed recreation.

- Off highway vehicles will be limited to existing roads and trails.

- Sandrail (off highway vehicle) use of the river corridor will be allowed to continue outside of the Gila Box Riparian National Conservation Area.

- Priority species and their habitat will be managed to maintain or enhance population levels.

- The study area will be inventoried and monitored to determine and track priority species populations.

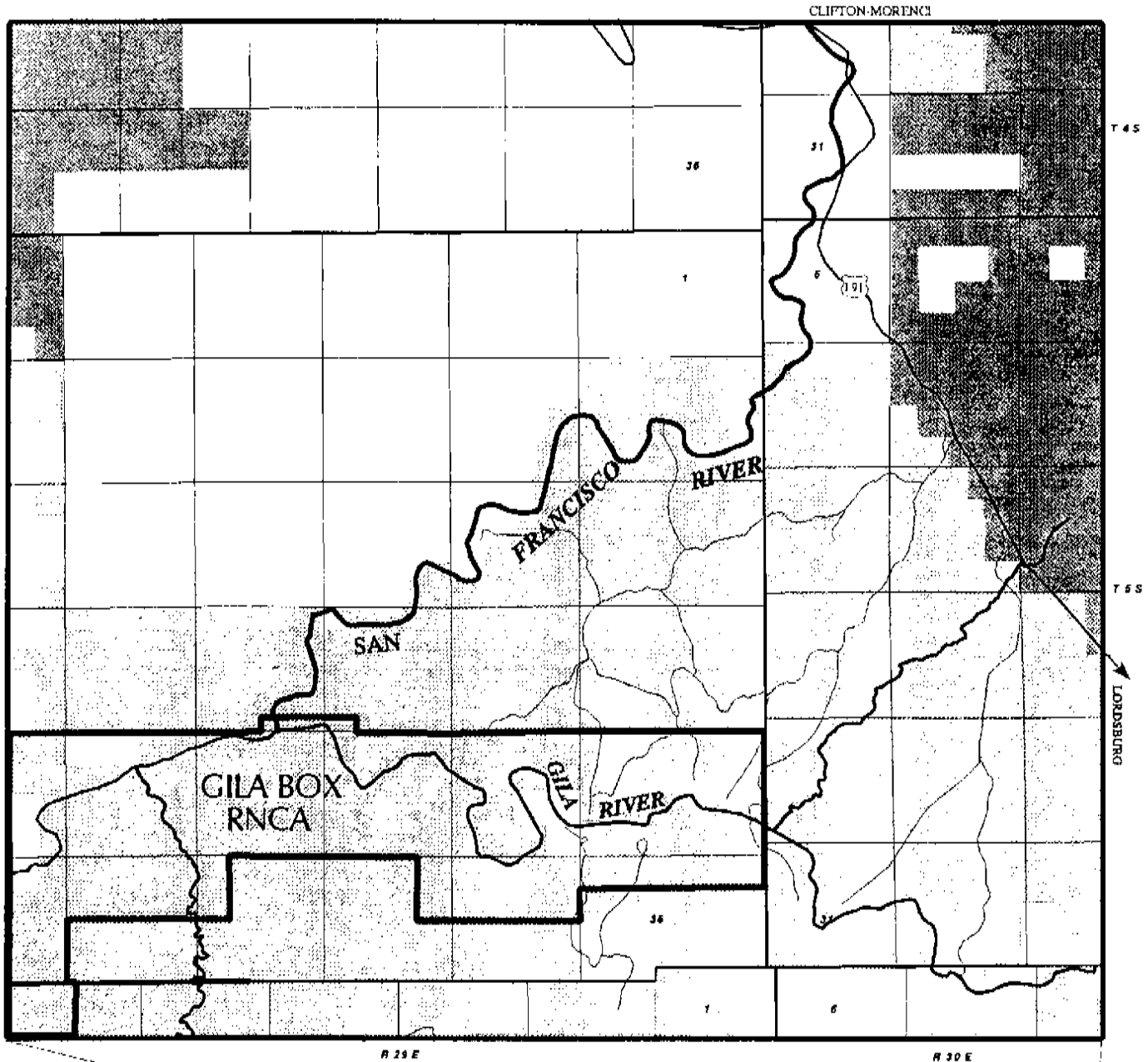
- Riparian vegetation will be managed to meet Bureau goals of having 75 percent of its riparian areas in functioning condition and an advanced ecological status by 1997.

- Upland vegetation will be managed under the desired plant community concept.

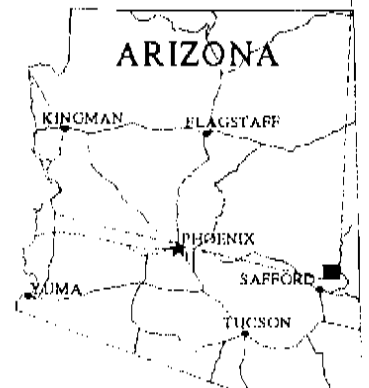
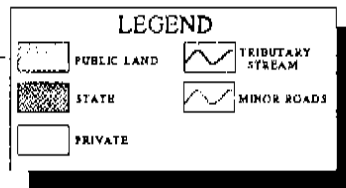
- Habitat impacts from grazing will be reduced through a combination of exclusion areas and seasonal grazing systems designed to reduce impacts on the riparian areas.

LOWER SAN FRANCISCO RIVER

(No Action Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA
October 1994



GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

- The Bureau of Land Management has applied for an instream flow water right of 10 cubic feet per second (cfs) with the state of Arizona. A federal reserved water right was acquired for the lower 1/8 mile of the river that is within the Gila Box Riparian National Conservation Area by the Arizona Desert Wilderness Act of 1990. Water rights quantification is on-going through the state appropriative process.
- Six miles of riparian pasture fence will be constructed along the river; the riparian pasture will be created out of parts of both allotments, and managed as part of the Smuggler Peak Allotment.
- Water sources have been developed on the uplands to reduce dependency on water in the river.

E. ALTERNATIVES CONSIDERED BUT REJECTED

The Arizona Rivers Coalition suggested designations for two segments of the San Francisco River. The Arizona Rivers Coalition proposed that one of these segments, consisting of 2.5 miles of the San Francisco River from Clifton to the south boundary of Section 14 private land, be found suitable and recommended for Recreational designation. The other, consisting of a reach from Section 14 land to the confluence with the Gila River, was proposed as Wild.

This recommendation was rejected because it closely reflects the Bureau of Land Management all suitable alternative and the differences were considered minor.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE LSF-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative	All suitable	No action (not suitable)
Impacts on Outstandingly Remarkable Scenic Values	Potential indirect adverse impacts	Potential indirect adverse impacts	Indirect adverse impacts
Impacts on Outstandingly Remarkable Recreational Values	No adverse impacts	No adverse impacts	No adverse impacts
Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values	Direct beneficial impacts	Direct beneficial impacts	Direct beneficial impacts
Impacts on Outstandingly Remarkable Geologic Resource Values	No adverse impacts	No adverse impacts	No adverse impacts
Impacts on Outstandingly Remarkable Hydrologic Values	No adverse impacts	No adverse impacts	No adverse impacts
Impacts on Mineral Development	No adverse impacts	Adverse impacts; segment 2 closed to mineral entry	No adverse impacts

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

A. OUTSTANDINGLY REMARKABLE VALUES

The Safford District Resource Management Plan identified scenic, recreational, fish, wildlife habitat, cultural resource, geologic, and hydrologic resources as outstandingly remarkable in determining that the Gila Box: Lower San Francisco river is eligible for consideration as a wild and scenic river.

The study area is characterized by a scenic, steep walled desert canyon. The Lower San Francisco flows through a striking steep walled canyon composed of conglomerate rock formations. The river is bordered by willows, and occasional mature cottonwood and sycamore trees. Soil and rock vary in color but are predominantly browns and tans. Water and geologic process have sculpted the canyon. Vegetation also enhances the scenery in the study area. Colors and textures change from the desert shrubs and grasses on the canyon rims and slopes to the riparian communities in the river bottom. Scattered pockets of green along the river add to the variety of color in the study area. A perennial ribbon of water along the canyon floor adds another dimension of color and texture to the landscape of the study area.

Perennial water, flowing through a scenic canyon, also provides a desired setting for a variety of recreation activities. The river provides outstanding opportunities for hiking, backpacking, seasonal river float trips, seasonal sandrail driving, camping, photography, wildlife viewing, and sightseeing. The natural condition of the area, rugged topography, twisting canyons, and flowing water contribute to the outstandingly remarkable recreation

opportunities in the proposed river area. The scarcity of this combination of natural features makes this recreation setting worthy of special management attention to preserve the recreation opportunities.

The riparian vegetation along the river course (cottonwoods, willows, and mesquite) is significant to wildlife, and an increasingly rare vegetation community. These vegetation communities are undoubtedly important resting and breeding habitat for neotropical migratory birds. The area contributes a substantial portion of the water flowing through the Gila Box, another significant riparian and wildlife area.

The Lower San Francisco River is a perennial water. Because year long water is so uncommon in the desert southwest, the hydrologic values are considered outstandingly remarkable. Perennial water is extremely important for vegetation, fish and wildlife, and recreation values.

The river is also important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system. The large amount of permanent water, cliffs, and isolation make the river outstanding habitat for many species.

B. MINERALS

The study area is not in any established mineral district, but lies just south of the Copper Mountain Mining District, around Clifton and Morenci. This is one of the most significant districts in the United States. The Phelps Dodge mine at Morenci is in the heart of the

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

district, and is the largest producer of copper in North America. The mine also produces gold, silver, and molybdenum.

Southwest of the study area, north of the Safford Valley, large tonnages of porphyry copper have been found in the Sanchez and Lone Star Mining Districts. These ore bodies are undeveloped, but production is scheduled to begin at the AZCO mine in the Sanchez District in 1994. It is anticipated that production will also begin at the Phelps Dodge Lone Star and Dos Pobres Mines in the next 20 years.

Rocks hosting these known ore bodies could underlie the study area, but are believed to be as much as 2,300 to 6,300 feet below the surface.

Fine flakes of placer gold have been found in the older alluvial gravel along the San Francisco River, and to a lesser extent in the modern alluvium of the river. Production, however, has been negligible. The only activity in recent years has been gold panning in the river. The U.S. Geological Survey and Bureau of Mines consider the potential for gold to be very low,

The only leasable mineral with production potential is geothermal energy. No known geothermal wells exist in the study area, but Gillard Hot Springs is located on the Gila River about one mile south of the study area.

There are no mineral leases in the study area and no exploration or development is expected in the next 20 years. The area is not considered prospectively valuable for other leasable minerals like coal, oil, gas, or phosphate.

Saleable minerals, sand and gravel, are common and widespread throughout the area. There are no existing operations in the study area and future demand for sand and gravel will easily be accommodated from sources outside the study area.

C. LANDS

There are 1,871 acres of public land and 593 acres of private land (in two parcels) in the study area. In segment 1, there are 1,130 acres of public land and two parcels of private land totalling 205 acres. Both parcels are owned by Phelps Dodge Corporation. One parcel is on the Lower San Francisco River and used as a picnic area. The other parcel (continues into segment 2) is used as part of the mining operation at Morenci.

Segment 2 includes 740 acres of public land and 390 acres of private land (in one parcel: a continuation of the private land parcel in segment 1). This parcel is a continuation of the parcel described in segment 1 that is being used in support of the tailing dams.

Segment 1 is accessible by three roads. The Smuggler Canyon jeep trail, a jeep trail on the south side of the river at the Phelps Dodge picnic area, and the main road from Morenci to the Phelps Dodge picnic area provide access to segment 1. There is also evidence of an old railroad grade in the segment.

There are no roads or railroads in segment 2. No additional roads are proposed in either segment.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

A 230 kV powerline crosses segment 1 on the downstream end of the private land at the Phelps Dodge picnic area. It is anticipated that in the next 20 years Phelps Dodge will need additional power for their mining operation. New power lines will be routed through this corridor crossing the Lower San Francisco River.

D. RECREATION

No precise figures are available but recreation use of the area is estimated at fewer than 1,000 visitor use days annually by Bureau of Land Management recreation specialists.

Fishing, tubing, hiking, picnicking, float boating (rafting, kayaking, and canoeing), wildlife viewing, and sandrail driving occur seasonally in the study area. An undeveloped picnic area is in segment 1 on Phelps Dodge property. The site is popular for picnicking, camping, fishing, swimming, and wildlife viewing. It is also used as a launch for float boating in the spring.

Float boating is popular on both segments. Although five commercial companies have permits to operate in the Gila Box (Gila and San Francisco Rivers), private use is more common. People using rafts, kayaks, and canoes regularly float the 25 mile stretch between the Phelps Dodge picnic area and Bonita Creek/Dry Canyon during the spring snow melt and the summer monsoon season.

In the summer and fall months, at low water (about 200 cfs), local residents drive sandrails in the river canyon. Sandrails provide access for sightseeing, fishing, picnicking, and recreation driving.

No recreation developments are planned in the study area. Existing recreation activities are projected to grow slowly in the study area over the next 20 years.

E. WILDLIFE

This river segment is not known to regularly support threatened and endangered or regionally significant wildlife. The San Francisco River is important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

Data are limited by dated inventories and monitoring efforts, but all previous efforts have failed to identify significant usage by any threatened and endangered or Bureau of Land Management priority species. Occasional use of the San Francisco River by bald eagles (*Haliaeetus leucocephalus*) and peregrine falcons (*Falco peregrinus*) undoubtedly occurs due to the wide-ranging habits of these raptors that are documented on the near by Gila river. However, the remote location of the study area and lack of access has discouraged systematic inventories.

This river segment contains habitat utilized by federal candidate species including the California leaf-nosed bat (*Macrotus californicus*), western mastiff-bat (*Eumops perotis californicus*), and southwest toad (*Bufo microscaphus*). Three state-listed species probably use habitat along the San Francisco River during migration, but detailed studies have not been conducted.

The San Francisco River is habitat for the population of bighorn sheep (*Ovis canadensis biglovi*) that utilizes the entire Gila Box area. This was the first location in North America where sheep were recorded. Mule deer (*Odocoileus hemionus*), javelina (*Pecari tajacu*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), skunks, ringtails (*Bassariscus astutus*), gray fox (*Urocyon cinereoargenteus*), a variety of ducks, Gambels quail (*Lophortyx gambelii*),

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

Gila woodpecker (Melanerpes uropygialis), mourning dove (Zenaidura macroura) and white-winged dove (Zenaidura asiatica) also are present.

The poor quality of existing riparian vegetation limits the diversity and population of breeding birds in the San Francisco River. Limited inventories in 1992 recorded low numbers and limited species diversity of resident and migratory species compared to the Gila River or Bonita Creek. The north-south aspect of the canyon undoubtedly makes this a migration route, but no studies have been conducted at the proper time of year to document its relative importance.

There is high potential for the development of aquatic and riparian habitat for wildlife of national and regionally importance.

Studies of fish in the early 1980's documented few native species, low populations, and a lack of rare species. Longfin dace (Agosia chrysogaster), sonora sucker (Catostomus insignis), desert sucker (Catostomus clarki), fathead minnow (Pimephales promelas), red shiner (Cyprinella lutrensis), common carp (Cyprinus carpio), mosquitofish (Gambusia affinis), channel catfish (Ictalurus punctatus) and flathead catfish (Pylodictis olivaris) have been observed in the San Francisco River.

The lowland leopard frog (Rana yavapaiensis), a state and federal candidate species, is known to occur in this river. This species is found in south central, central, west central and extreme northwestern Arizona generally at elevations below 3,000 feet. It is dependent on permanent water and is threatened by habitat destruction, human disturbance of aquatic habitat, and the introduction of predaceous fishes and bullfrogs.

Other species known to utilize the San Francisco River study area include western yellow-billed cuckoo (Coccyzus americanus), belted kingfisher (Ceryle alcyon), bell's vireo (Vireo bellii arizonae).

F. RIPARIAN VEGETATION

Riparian areas are distinctive, productive, and important ecosystems in the desert southwest. Riparian habitat has disproportionate value in southeastern Arizona due to the presence of surface water and the abundant vegetation which is surrounded by harsher, drier, and usually less productive environments. The San Francisco River offers a perennial source of water and an oasis of vegetation in an otherwise predominantly dry landscape.

This reach of the San Francisco River provides a range of terrace development from broad high terraces with old growth mesquite and broad low terraces of cottonwood/willow to areas of little or no terrace development. These terraces coupled with a continual water supply provide the potential for abundant vegetation, cooler and moister conditions, and abundant niches for wildlife.

The riparian habitat of this stream is in poor to fair condition. The extent, density, structural diversity and species diversity of the riparian vegetation is far below potential. Riparian vegetation community development is possible with changes in land management practices.

The San Francisco River has narrow strips of the cottonwood-willow riparian community characterized by a sparse gallery forest of Fremont cottonwood and Goodding willow. This community is sometimes intermixed with mesquite and tamarisk as well as shrubs, grasses and forbs. The primary grass species associated with it are bermuda grass and red brome.

Mesquite bosques, characterized by large mesquite, with a closed canopy 30 to 45 feet high, are also present. The major grasses associated with this community are bermuda grass and red brome.

The riparian scrub is usually composed of a dense stand of narrowleaf shrubs. Dominant

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

species are usually seepwillow, burro brush, desert willow or coyote willow. Other species could include mesquite, catclaw and tamarisk.

Upland vegetation communities are primarily sonoran desert scrub and desert grasslands.

G. CULTURAL RESOURCES

The Lower San Francisco River study area has been occupied intermittently since about 800 A.D. by people of the Mogollon and Salado cultures. Known sites in the study area consist of small settlement areas containing stone tools. They represent temporary hunting and plant gathering camps.

In the historic period several famous people entered the area, including the Spanish explorer Coronado, and the first fur trapper in Arizona, James Ohio Pattie. Pattie went down the Gila and trapped beaver on the San Francisco beginning in 1826. The beaver were almost completely trapped out of the Gila by 1837. General Stephen Watts Kearny led 100 Dragoons (the Army of the West) through this area on his way to California to fight in the Mexican War of 1846. Kit Carson was the scout for that expedition.

The Apache moved through the area while on raiding trips to southeastern Arizona and Mexico, and sometimes used the area as a haven. These raids occurred from the 1860s through the 1880s, until Geronimo surrendered in 1886.

Waters from the river were also crucial to the settlement of the region and the development of a nationally important mining industry at Clifton and Morenci.

H. WATER RESOURCES

Bureau of Land Management inventories identify the two segments in the study area as a single hydrologic unit with similar hydrologic characteristics throughout the reach. No

surface water diversions or impoundments occur in the study area.

This section of the river is perennial in nature with fairly uniform resource values along its length. Seasonal fluctuations in flow follow the precipitation pattern of high flow during the winter and following summer thunderstorms and low flows during the late spring and fall.

Maximum discharge during the 67 years of record was 90,900 cfs, minimum discharge was 6.1 cfs, and average discharge is 212 cfs. A shallow groundwater aquifer is found beneath the river in the younger alluvium.

The San Francisco River has highly mineralized water primarily due to the inflow from Clifton Hot Springs. The water sometimes exceeds the State of Arizona bacteria standards for fecal coliform and fecal streptococci.

Water rights in the Gila River Basin are currently undergoing litigation in the state and federal courts. The issue of water rights is controversial and the distinction between state and federal jurisdiction is unclear. Three permittees hold water rights for cattle watering. The Bureau of Land Management has applied for an instream flow water right with the Arizona Department of Water Resources for 10 cfs and will quantify a Federal Reserve water right in 1994. Water rights quantification is ongoing through the state appropriate process.

These rights, even if perfected, are junior to nearly all other water rights in the basin. Since the whole Gila River basin is thought to be over allocated in all but the wettest years streamflow in this stream depends on the downstream points of diversion for senior water rights.

No main channel dam construction is anticipated in the reasonably foreseeable future (next 20 years), or upstream of the study area. A possibility exists that the Quail Springs Dam could be constructed on the San Francisco River above Clifton. Flood control levees

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

planned for the San Francisco River in Clifton, however, will be constructed.

No construction of other diversions or structures is anticipated in the study area in the next 20 years.

I. LIVESTOCK GRAZING

Three active grazing allotments with permits for 422 animal units encompass the two segments of the San Francisco River. The allotments cover 1,871 acres of the study area. One of these, the Smuggler Peak Allotment, is under yearlong livestock management. The other two allotments are on rotational grazing systems. The portion of these allotments within the study area is small and is estimated to provide forage for 23 of the 422 animal units.

Historic livestock management practices allowed livestock unlimited use of the riparian area resulting in undesirable degradation of the vegetation communities found there.

Fencing projects to control riparian access and the development of water sources in the uplands has been the recent focus of Bureau of Land Management livestock management in these three allotments.

Livestock management actions continue to focus on the riparian areas to further reduce livestock related impacts to the riparian area. Livestock will either be excluded from the riparian areas or will be limited to seasonal use.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Gila Box: Lower San Francisco River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The life of the project and long term impacts is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated wild and scenic river. In this case the Gila Box Interdisciplinary Activity Plan will serve as the river management plan.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine.

Large mining operations would be those involving more than five acres and subject to approval of Bureau of Land Management approved Plans of Operations.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative would determine two segments totaling 6.4 miles of the 8-mile Gila Box: Lower San Francisco River to be suitable and recommends them for designation with a Recreational classification. The

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

remainder of the study area would be determined not suitable. The outstandingly remarkable values in the suitable segments recommended for designation would receive long-term legislative protection. Outstandingly remarkable values in the remainder of the area would not receive special legislative protection under the Wild and Scenic Rivers Act.

The outstandingly remarkable values outside of the designated areas will be protected by the Safford District Resource Management Plan (1993).

Impacts on Outstandingly Remarkable Scenic Values

The study area is characterized by a scenic, steep walled desert canyon. The Gila Box: Lower San Francisco flows through a striking steep walled canyon composed of conglomerate rock formations. The river is bordered by willows, and occasional mature cottonwood and sycamore trees. Soil and rock vary in color but are predominantly browns and tans. Water and geologic processes have sculpted the canyon. Vegetation also enhances the scenery in the study area. Colors and textures change from the desert shrubs and grasses on the canyon rims and slopes to the riparian communities in the river bottom. Scattered pockets of green along the river add to the variety of color in the study area. A perennial ribbon of water along the canyon floor adds another dimension of color and texture to the landscape of the study area.

Implementation of the recommended alternative would involve wild and scenic river management actions that would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This would benefit the outstandingly remarkable scenic values by eliminating any threats that might impair the

values.

Patents would be restricted to the mineral estate. This would ensure protection of the outstandingly remarkable scenic values by ensuring that the surface would remain under federal protection after mining had ceased.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, surface occupancy for leasable minerals and the sale of minerals materials will be prohibited in the riparian area.

The study area will be managed as an extensive recreation management area for dispersed recreation. Off highway vehicles will be limited to existing roads and trails in portions of the study area outside the Gila Box Riparian National Conservation Area. Off highway vehicles will be limited to designated roads within the conservation area. The roads in segment 1 would remain open.

The eligibility evaluation considered the effects of the use of private lands adjacent to the study area for tailings dams at the Phelps Dodge mine at Morenci. The Gila Box: Lower San Francisco River was identified as eligible for further suitability consideration because these effects were not considered significant.

Wild and scenic river designation does not affect nonfederal land or the uses that may occur on private lands.

Adverse impacts on the outstandingly remarkable scenic values on the suitable and nonsuitable portions of the study area could result from growth and increased mining activity. Additional power lines may be built to service the Phelps Dodge mining operation. Even if the lines are routed through existing corridors, additional poles, towers and lines would have negative visual impacts. The growth of Phelps Dodge tailing piles will cause indirect degradation of scenic values.

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- Conclusion

Under the recommended alternative the outstandingly remarkable scenic values in the Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act. However they would still be vulnerable to indirect adverse impacts from industrial developments on private land.

The outstandingly remarkable scenic values in the nondesignated portion of the study area would not have long-term legislative protection and would be vulnerable to indirect adverse impacts from industrial developments on private land.

Impacts to Outstandingly Remarkable Recreational Values

Perennial water, flowing through a scenic canyon, also provides a desired setting for a variety of recreation activities. The river provides outstanding opportunities for hiking, backpacking, seasonal rafting, seasonal sandrail driving, camping, photography, wildlife viewing, and sightseeing. The natural condition of the area, rugged topography, twisting canyons, and flowing water contribute to the outstandingly remarkable recreation opportunities in the proposed river area.

Implementation of the recommended alternative would involve wild and scenic river management actions that would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This would benefit the outstandingly remarkable recreational values by eliminating any threats that might impair the values.

Patents would be restricted to the mineral estate. This would ensure protection of the outstandingly remarkable recreational values by

ensuring that the surface would remain under federal protection after mining had ceased.

Additional protection for the outstandingly remarkable recreational values would be supplied by the ongoing management activities described in Chapter II. For example, surface occupancy for leasable minerals and the sale of minerals materials will be prohibited in the riparian area.

The study area will be managed as an extensive recreation management area for dispersed recreation. Off highway vehicles will be limited to existing roads and trails in portions of the study area outside the Gila Box Riparian National Conservation Area. Off-highway vehicles will be limited to designated roads within the conservation area.

The eligibility evaluation considered the effects of the use of private lands adjacent to the study area for tailings dams at the Phelps Dodge mine at Morenci. The Gila Box: Lower San Francisco River was identified as eligible for further suitability consideration because these effects were not considered significant.

Wild and scenic river designation does not affect nonfederal land or the uses that may occur on private lands.

Adverse impacts on the outstandingly remarkable recreational values on the nonsuitable portion of the study area could result from growth and increased mining activity. Additional power lines may be built to service the Phelps Dodge mining operation. Even if the lines are routed through existing corridors, additional poles, towers and lines will have negative visual impacts.

The roads in segment 1 would remain open.

- Conclusion

Under the recommended alternative the outstandingly remarkable recreation values in

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the Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act.

The outstandingly remarkable recreation values in the nondesignated portion of the study area would not have long-term legislative protection and would be vulnerable to indirect adverse impacts from industrial developments on private land.

Impacts to Fish and Wildlife Habitat Values.

The riparian vegetation along the river course (cottonwoods, willows, and mesquite) is significant to wildlife, and is an increasingly rare vegetation community. This river segment is not known to regularly support threatened and endangered or regionally significant wildlife. The San Francisco River is important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

Under the recommended alternative the study area will remain open to mineral entry. Leasing and mineral sales would be prohibited in the riparian area. This action will prevent surface disturbance and impacts to riparian vegetation, soil, and water resources.

Grazing will be reduced through a combination of exclusion areas and seasonal grazing systems designed to reduce impacts on the riparian area. Six miles of riparian pasture fence will be constructed along the river. Water sources have been developed on the uplands to reduce livestock dependency on water in the river. These actions benefit riparian vegetation and water quality by reducing direct impacts from grazing.

Off highway vehicles will be limited to existing roads and trails. Impacts to riparian vegetation, soils, and water resources will remain negligible for the foreseeable future.

• Conclusion

Ongoing management actions under the implementation of the recommended alternative would have direct beneficial impacts on the fish and wildlife habitat values.

Impacts to Geologic Values.

Geologic features in the Gila Box: Lower San Francisco River study area include volcanic and volcanoclastic rocks ranging from pleistocene to oligocene.

These flows and pyroclastics are chiefly andesites and basaltic andesites. The highly eroded volcanic and conglomerate formations provide unusual geologic values in the study area.

Under the recommended alternative the study area will remain open to mineral entry, although surface occupancy for leasable minerals and the sale of minerals materials would be prohibited in the riparian area.

• Conclusion

Ongoing management actions under the implementation of the recommended alternative would have no direct adverse impacts on the geologic values.

Impacts to Outstandingly Remarkable Hydrologic values.

The Gila Box: Lower San Francisco is a perennial river. Because year long water is so uncommon in the desert southwest, the hydrologic values are considered outstandingly remarkable. Perennial water is extremely important for vegetation, fish and wildlife, and recreation values.

The river is also important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

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Implementation of the recommended alternative would involve wild and scenic river management actions that would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This would benefit the outstandingly remarkable hydrologic values by eliminating any threats that might impair the values.

Additional protection for the outstandingly remarkable hydrologic values would be supplied by the ongoing management activities described in Chapter II. For example, by legislation, dams and water impoundments are prohibited in the study area.

• Conclusion

Under the recommended alternative the outstandingly remarkable hydrologic values in the Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act.

Implementation of the recommended alternative would have no direct adverse impacts on the outstandingly remarkable hydrologic values.

Impacts to Mineral Development

The study area is not in any established mineral district, but lies just south of the Copper Mountain Mining District, around Clifton and Morenci. This is one of the most significant copper mining districts in the United States. It also produces gold, silver, and molybdenum.

Rocks hosting these known ore bodies could underlie the study area, but are believed to be as much as 2,300 to 6,300 feet below the surface.

The U.S. Geological Survey and Bureau of Mines consider the potential for gold to be very

low within the study area.

No known geothermal wells exist in the study area. The area is not considered prospectively valuable for other leasable minerals like coal, oil, gas, or phosphate.

Operation and expansion of the near by Phelps Dodge Morenci Mine will not be impacted by the recommended alternative. The growth of tailings piles and identified routes for additional power lines will not be affected by the recommended alternative.

The study area will remain open to mineral entry due to the recreational classification. No discovery of mineral potential or development within the study area is expected.

• Conclusion

Implementation of the recommended alternative would have no adverse impacts on mining and mineral development.

Mineral development and access will not be adversely impacted by the implementation of the recommended alternative.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the river study area. Over most of the area, the type of actions that could affect, or would be affected by,

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implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Safford District Resource Management Plan (1992) and the draft Gila Box Riparian National Conservation Area Management Plan.

The cumulative impacts to uses and values other than scenic values associated with implementation of the recommended alternative would be negligible due to the regulations and management constraints on these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative mineral entry would be allowed in the study area outside the Gila Box Riparian National Conservation Area and resource management activities would be subject to the Safford District Resource Management Plan. Resource management plans are administrative decisions and subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

There will be no unavoidable adverse effects from implementation of the recommended alternative. Indirect adverse impacts could occur to outstandingly remarkable scenic values from the expansion of the Phelps Dodge Morenci mine.

Other uses and values found in the area will be protected due to the restrictions on activities and protective strategies identified in the recommended alternative and the Safford District Resource Management Plan.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-

term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The Safford District Resource Management Plan identified fish, wildlife, riparian, hydrologic, recreation, geologic, scenic, historic and cultural resources as outstandingly remarkable in determining that the Gila Box area of the Lower San Francisco River is eligible for consideration as a wild and scenic river.

The all suitable alternative would determine segment 1 as suitable and recommends it for designation with a Recreational classification, and would determine segment 2 as suitable and recommends it for designation with a Wild classification. The outstandingly remarkable values in the segments recommended for designation would receive long-term legislative protection.

Impacts on Outstandingly Remarkable Scenic Values

The study area is characterized by a scenic, steep walled desert canyon. The Lower San Francisco flows through a striking steep walled canyon composed of conglomerate rock formations. The river is bordered by willows, and occasional mature cottonwood and sycamore trees. Soil and rock vary in color but are predominantly browns and tans. Water and geologic processes have sculpted the canyon. Vegetation also enhances the scenery in the study area. Colors and textures change from the desert shrubs and grasses on the canyon rims and slopes to the riparian communities in the river bottom. Scattered pockets of green along the river add to the variety of color in the study area. A perennial ribbon of water along the canyon floor adds another dimension of color and texture to the landscape of the study area.

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Implementation of the all suitable alternative would involve wild and scenic river management actions that would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This would benefit the outstandingly remarkable scenic values by eliminating any threats that might impair the values.

Wild segment 2 would be closed to new mineral entry and leasing. This would benefit the outstandingly remarkable scenic values by preventing conflicts that may occur to scenic values from mineral activities.

New mining claims would be allowed in segment 1. Patents would be restricted to the mineral estate. This would ensure protection of the outstandingly remarkable scenic values by ensuring that the surface would remain under federal protection after mining had ceased.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, surface occupancy for leasable minerals and the sale of minerals materials will be prohibited in the riparian area.

The study area will be managed as an extensive recreation management area for dispersed recreation. Off highway vehicles will be limited to existing roads and trails in portions of the study area outside the Gila Box Riparian National Conservation Area. Off highway vehicles will be limited to designated roads within the conservation area.

The eligibility evaluation considered the effects of the use of private lands adjacent to the study area for tailings dams at the Phelps Dodge mine at Morenci. The Gila Box: Lower San Francisco River was identified as eligible for further suitability consideration because these effects

were not considered significant.

Wild and scenic river designation does not affect nonfederal land or the uses that may occur on nonfederal lands.

Adverse impacts on the outstandingly remarkable scenic values on the study area could result from growth and increased mining activity. Additional power lines may be built to service the Phelps Dodge mining operation. Even if the lines are routed through existing corridors, additional poles, towers and lines will have negative visual impacts. The growth of Phelps Dodge tailing piles will cause indirect degradation of scenic values.

The roads in segment 1 would remain open.

• Conclusion

Under the all suitable alternative the outstandingly remarkable scenic values in the Wild and Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act.

Indirect adverse impacts to the outstandingly remarkable could occur from the expansion of the Phelps Dodge operations. These would involve the effects of new powerline towers, increased tailings deposits and other ancillary functions.

Impacts to Outstandingly Remarkable Recreational Values

Perennial water, flowing through a scenic canyon, also provides a desired setting for a variety of recreation activities. The river provides outstanding opportunities for hiking, backpacking, seasonal rafting, seasonal sandrail driving, camping, photography, wildlife viewing, and sightseeing. The natural condition of the area, rugged topography, twisting canyons, and flowing water contribute to the outstandingly remarkable recreation opportunities in the proposed river area.

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Under the all suitable alternative segment 1 of the river study area would remain open to mineral entry. Segment 2 will be closed to mineral entry. Surface occupancy for leasable minerals and the sale of minerals materials would be prohibited in the riparian area.

Implementation of the all suitable alternative would involve wild and scenic river management actions that would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This would benefit the outstandingly remarkable recreational values by eliminating any threats that might impair the values.

Wild segment 2 would be closed to new mineral entry and leasing. This would benefit the outstandingly remarkable recreational values by preventing conflicts that may occur to recreation values from mineral activities.

New mining claims would be allowed in segment 1. Patents would be restricted to the mineral estate. This would ensure protection of the outstandingly remarkable recreational values by ensuring that the surface would remaining under federal protection after mining had ceased.

Additional protection for the outstandingly remarkable recreational values would be supplied by the ongoing management activities described in Chapter II. For example, surface occupancy for leasable minerals and the sale of minerals materials will be prohibited in the riparian area.

Under the all suitable alternative the study area would be managed as a dispersed recreation area. Off highway vehicles would be limited to existing roads and trails. Off highway vehicles will be limited to existing roads and trails in portions of the study area outside the Gila Box

Riparian National Conservation Area. Off highway vehicles will be limited to designated roads within the conservation area.

Off highway vehicles will be prohibited in Wild segment 2. This would benefit the other outstandingly remarkable recreation values by eliminating conflicts between off highway vehicle users and other recreation users. Roads in segment 1 would remain open.

No recreation developments are planned in the study area. The low levels of existing recreation use are expected to increase slowly. The existing recreational activities are projected to continue in the study area over the next 20 years.

The eligibility evaluation considered the effects of the use of private lands adjacent to the study area for tailings dams at the Phelps Dodge mine at Morenci. The Gila Box: Lower San Francisco River was identified as eligible for further suitability consideration because these effects were not considered significant.

Wild and scenic river designation does not affect nonfederal land or the uses that may occur on nonfederal lands.

Adverse impacts on the outstandingly remarkable recreational values on the nonsuitable portion of the study area could result from growth and increased mining activity. Additional power lines may be built to service the Phelps Dodge mining operation. Even if the lines are routed through existing corridors, additional poles, towers and lines will have negative visual impacts.

• Conclusion

Under the all suitable alternative the outstandingly remarkable recreational values in the Wild and Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act.

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Indirect adverse impacts to the outstandingly remarkable recreational values could occur from the expansion of the Phelps Dodge operations. These would involve the effects of new powerline towers, increased tailings deposits and other ancillary functions.

• Conclusion

Implementation of the all suitable alternative would not have direct adverse impacts on all outstandingly remarkable recreational values except motorized vehicle based recreation in segment 2. Motorized vehicles will be prohibited in this segment and will cause adverse impacts to these users.

Impacts to Outstandingly Remarkable Fish and Wildlife Habitat Values.

The riparian vegetation along the river course (cottonwoods, willows, and mesquite) is significant to wildlife, and is an increasingly rare vegetation community. This river segment is not known to regularly support threatened and endangered or regionally significant wildlife. The San Francisco River is important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

Implementation of the all suitable alternative would involve wild and scenic river management actions that would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This would benefit the outstandingly remarkable fish and wildlife habitat values by eliminating any threats that might impair the values.

Wild segment 2 would be closed to new mineral entry and leasing. This would benefit the outstandingly remarkable fish and wildlife habitat values by preventing conflicts that may occur to

fish and wildlife habitat values from mineral activities.

New mining claims would be allowed in segment 1, but they would be restricted to mineral estate patent. This would ensure protection of the outstandingly remarkable fish and wildlife habitat values by ensuring that the surface would remain under federal protection after mining had ceased.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter 2. For example, grazing will be reduced through a combination of exclusion areas and seasonal grazing systems designed to reduce impacts on the riparian area. Six miles of riparian pasture fence will be constructed along the river. Water sources have been developed on the uplands to reduce livestock dependency on water in the river.

Off highway vehicles will be limited to existing roads and trails.

• Conclusion

Under the all suitable alternative the outstandingly remarkable fish and wildlife habitat values in the Wild and Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act.

Implementation of the all suitable alternative would have direct beneficial impacts on the outstandingly remarkable fish and wildlife habitat values.

Impacts to Outstandingly Remarkable Geologic Values.

Geologic features in the Lower San Francisco River study area include volcanic and volcanoclastic rocks ranging from pleistocene to oligocene.

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These flows and pyroclastics are chiefly andesites and basaltic andesites. The highly eroded volcanic and conglomerate formations provide outstandingly remarkable geologic values in the study area.

Implementation of the all suitable alternative would involve wild and scenic river management actions that would prohibit new mineral entry and leasing in segment 2. This would benefit the outstandingly remarkable geologic values by preventing conflicts that may occur from mineral activities.

New mining claims would be allowed in segment 1. Patents would be restricted to the mineral estate. This would ensure protection of the outstandingly remarkable geologic values by ensuring that the surface would remain under federal protection after mining had ceased.

• Conclusion

Under the all suitable alternative the outstandingly remarkable geologic values in the Wild and Recreational segments would be under long-term legislative protection from the Wild and Scenic Rivers Act.

Implementation of the all suitable alternative would have no direct adverse impacts on the outstandingly remarkable geologic values.

Impacts to Outstandingly Remarkable Hydrologic Values.

The Lower San Francisco River is perennial. Because year long water is so uncommon in the desert southwest, the hydrologic values are considered outstandingly remarkable. Perennial water is extremely important for vegetation, fish and wildlife, and recreation values.

The river is also important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

Under the all suitable alternative and the Gila Box Riparian National Conservation Area Management Plan dams and water impoundments are prohibited in the of the study area.

• Conclusion

Implementation of the all suitable alternative will have beneficial impacts on the outstandingly remarkable hydrologic values.

Impacts to Mineral Development

The study area is not in any established mineral district, but lies just south of the Copper Mountain Mining District, around Clifton and Morenci. This is one of the most significant copper mining districts in the United States. It also produces gold, silver, and molybdenum.

Rocks hosting these known ore bodies could underlie the study area, but are believed to be as much as 2,300 to 6,300 feet below the surface.

The U.S. Geological Survey and Bureau of Mines consider the potential for gold to be very low within the study area.

No known geothermal wells exist in the study area. The area is not considered prospectively valuable for other leasable minerals like coal, oil, gas, or phosphate.

Operation and expansion of the nearby Phelps Dodge Morenci Mine will not be impacted by the all suitable alternative. The growth of tailings piles will not be affected by this alternative. The additional power lines required for future expansion will be routed through the existing utility corridor if no feasible alternative outside the study area is found.

Segment 1 of the study area will remain open to mineral entry due to the recreational classification. All of segment 2 will be closed to future mineral entry due to the wild

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classification. No discovery of mineral potential or development within the study area is expected.

• Conclusion

Ongoing management actions under implementation of the all suitable alternative will have no adverse impacts on mining and mineral development in segment 1.

However, minerals development, motorized vehicle access and motorized vehicle recreation would suffer adverse impacts from the designation of segment 2 as wild.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION/NOT SUITABLE ALTERNATIVE

The Safford District Resource Management Plan identified scenic, recreation, fish and wildlife populations and habitat, cultural resources, geologic and hydrologic resources as outstandingly remarkable in determining that the Gila Box: Lower San Francisco River is eligible for consideration as a wild and scenic river.

The no action alternative recommends nondesignation for the entire Gila Box: Lower San Francisco River study area. No wild and scenic river management actions would occur. There would be no long-term legislative protection for the outstandingly remarkable values identified in the eligibility evaluation.

Impacts on Outstandingly Remarkable Scenic Values

The study area is characterized by a scenic, steep walled desert canyon. The Lower San Francisco flows through a striking steep walled canyon composed of conglomerate rock formations. The river is bordered by willows, and occasional mature cottonwood and sycamore trees. Soil and rock vary in color but are predominantly browns and tans. Water and geologic processes have sculpted the canyon. Vegetation also enhances the scenery in the

study area. Colors and textures change from the desert shrubs and grasses on the canyon rims and slopes to the riparian communities in the river bottom. Scattered pockets of green along the river add to the variety of color in the study area. A perennial ribbon of water along the canyon floor adds another dimension of color and texture to the landscape of the study area.

Under the no action alternative the study area would remain open to mineral entry although surface occupancy for leasable minerals and the sale of minerals materials would be prohibited in the riparian area. The roads in segment 1 would remain open. The growth of Phelps Dodge tailing piles will cause indirect degradation of scenic values.

• Conclusion

Ongoing actions under the implementation of the no action alternative will not control the adverse impacts associated with mining on the outstandingly remarkable scenic values of the study area. Long term impacts will be negative and significant.

Impacts to Outstandingly Remarkable Recreational Values

Perennial water, flowing through a scenic canyon, also provides a desired setting for a variety of recreation activities. The river provides outstanding opportunities for hiking, backpacking, seasonal rafting, seasonal sandrail driving, camping, photography, wildlife viewing, and sightseeing. The natural condition of the area, rugged topography, twisting canyons, and flowing water contribute to the outstandingly remarkable recreation opportunities in the proposed river area.

Under the no action alternative the river study area would remain open to mineral entry although surface occupancy for leasable minerals and the sale of minerals materials would be prohibited in the riparian area.

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No recreation developments are planned in the study area. The low levels of existing recreation use are not expected to change. The existing recreational activities are projected to continue in the study area over the next 20 years. Under the no action alternative the study area would be managed as a dispersed recreation area. Off highway vehicles would be limited to existing roads and trails.

- Conclusion

Ongoing management actions under implementation of the no action alternative would not have direct adverse impacts on the outstandingly remarkable recreational values.

Impacts to Outstandingly Remarkable Fish and Wildlife Habitat Values.

The riparian vegetation along the river course (cottonwoods, willows, and mesquite) is significant to wildlife, and is an increasingly rare vegetation community. This river segment is not known to regularly support Threatened and Endangered or regionally significant wildlife. The San Francisco River is important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

Ongoing management actions listed in Chapter II would provide protection to the outstandingly remarkable fish and wildlife habitat values. For example, leasing and mineral sales would be prohibited in the riparian area. Grazing will be reduced through a combination of exclusion areas and seasonal grazing systems designed to reduce impacts on the riparian area. Six miles of riparian pasture fence will be constructed along the river. Water sources have been developed on the uplands to reduce livestock dependency on water in the river.

Off highway vehicles will be limited to existing roads and trails.

- Conclusion

Ongoing management actions under implementation of the no action alternative will have direct beneficial impacts on the outstandingly fish and wildlife habitat values.

Impacts to Outstandingly Remarkable Geologic Values.

Geologic features in the study area include volcanic and volcanoclastic rocks ranging from pleistocene to oligocene.

These flows and pyroclastics are chiefly andesites and basaltic andesites. The highly eroded volcanic and conglomerate formations provide outstandingly remarkable geologic values in the study area.

Under the no action alternative the study area would remain open to mineral entry. The ongoing management actions described in Chapter II would protect the outstandingly remarkable geologic values. Surface occupancy for leasable minerals and the sale of minerals materials would be prohibited in the riparian area. The roads in segment 1 would remain open.

- Conclusion

Ongoing management actions under the implementation of the no action/not suitable alternative would have no direct adverse impacts on the outstandingly remarkable geologic values.

Impacts to Outstandingly Remarkable Hydrologic Values.

The Lower San Francisco River is a perennial water. Because year long water is so uncommon in the desert Southwest, the hydrologic values are considered outstandingly remarkable. Perennial water is extremely important for vegetation, fish and wildlife, and recreation values.

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The river is also important to wildlife as a source of about half the water that flows through the Gila Box, supporting that aquatic and riparian system.

Ongoing management actions under the no action alternative and the Gila Box Riparian National Conservation Area Management Plan prohibit dams and water impoundments in the portion of the study area within the National Riparian Conservation Area.

- **Conclusion**

Ongoing management actions under the implementation of the no action alternative would have no direct adverse impacts on the outstandingly remarkable geologic values.

Impacts to Mineral Development

The study area is not in any established mineral district, but lies just south of the Copper Mountain Mining District, around Clifton and Morenci. This is one of the most significant copper mining districts in the United States. It also produces gold, silver, and molybdenum.

Rocks hosting these known ore bodies could underlie the study area, but are believed to be as much as 2,300 to 6,300 feet below the surface.

The U.S. Geological Survey and Bureau of Mines consider the potential for gold to be very low within the study area.

No known geothermal exist in the study area. The area is not considered prospectively valuable for other leasable minerals like coal, oil, gas, or phosphate.

Operation and expansion of the near by Phelps Dodge Morenci Mine will not be impacted by the no action alternative. The growth of tailings piles and identified routes for additional power lines will not be affected.

The study area outside the Gila Box Riparian National Conservation Area will remain open to mineral entry. No discovery of mineral potential or development within the study area is expected.

- **Conclusion**

Ongoing management actions under the implementation of the no action alternative will have no adverse impacts on mining and mineral development.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Gila Box: Lower San Francisco River Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that the Gila Box: Lower San Francisco River was eligible for further wild and scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Gila Resource Area Office, Safford, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Gila Box: Lower San Francisco Wild and Scenic study area were held in Tucson, April 13, 1993, Phoenix on April 14, 1993, Clifton April 19, 1993, and Safford, April 20, 1993. Approximately 35 to 40 attended the Tucson meeting, fifty-five to

60 people attended the Phoenix meeting, and about 50 attended each meeting in Clifton and Safford.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This wild and scenic rivers environmental impact document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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Members of the Review Group reviewed the document for consistency. They are:

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson acted as project manager.

GILA BOX: LOWER SAN FRANCISCO RIVER WILD AND SCENIC RIVER STUDY AREA

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Bureau of Land Management, 1994

**MIDDLE GILA RIVER
WILD AND SCENIC RIVER STUDY AREA**

**PHOENIX RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

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MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

The Middle Gila River study area (from Coolidge Dam to Hayden) was identified in the Safford District Resource Management Plan (Partial Record of Decision 1992) as eligible for further study in the wild and scenic river evaluation process. This portion of the Gila River was also identified in the National Rivers Inventory as worthy of further consideration.

The purpose of this action is to determine the suitability for recommending the Middle Gila River study area to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Middle Gila River study area is in southeastern Arizona approximately 50 miles north of Tucson, Arizona, and represents the midpoint between Gila and Pinal Counties. The stretch of river is administered by the Phoenix Resource Area of the Phoenix District.

The study area ranges in elevation from approximately 2,382 feet at Coolidge Dam to about 1,935 feet near the tailings pond at the study area's lower end. The study area is within the Mexican Highland Section of the Basin and Range Physiographic Province.

The width of the river floodplain varies from 60 feet to over 600 feet. The river segment is

situated in the Upper Gila River Basin. The drainage area of the 32-mile study area is 382 square miles. The entire drainage area of the Gila River upstream of Winkelman is 13,268 square miles. Major tributaries entering the Gila River in the study area include Dick Spring Canyon, Mescal Creek, Dripping Spring Wash, the San Pedro River, and from the San Carlos Apache Indian Reservation, Hawk Canyon, Deer Creek and Ash Creek.

The study area consists of three segments in its 32-mile length. For segments 1 and 2 and a small portion of segment 3, the eligible study river lies primarily north of the Middle Gila River. Public domain that includes Bureau of Land Management and Bureau of Reclamation withdrawals shares 19.1 miles with the San Carlos Indian Reservation.

The entire study river has outstandingly remarkable scenic, geologic, and fish and wildlife habitat values.

Segment 1 is 5.5 miles in length and contains approximately 580 acres of public land in this segment. About 180 acres of San Carlos Apache Indian Reservation lands are in the segment. It has been classified as Recreational.

Segment 2 is about 12.5 miles long and contains 2,630 acres of public land. Much of this segment is in the Needle's Eye Wilderness and has been classified as Wild.

Segment 3 is approximately 14 miles long and contains about 2,920 acres of public land, 700 acres of state land, and 1,505 acres of private land, totaling 5,125 acres. This segment has been classified as Recreational.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE MG-1
WILD AND SCENIC RIVERS STUDY AREA**

MIDDLE GILA	BLM/BOR 1/	STATE OF ARIZONA	TRIBAL	PRIVATE	TOTAL
SEGMENT 1	5	0	0.5	0	5.5
SEGMENT 2	12.5	0	0	0	12.5
SEGMENT 3	7	1.4	0	5.6	14
TOTAL MILES	24.5	1.4	0.5	5.6	32.0
PERCENT	77	4	1	18	100
TOTAL ACRES	6,130	700	180	1,505	8,515
PERCENT	72	8	2	18	100

1/ BOR = Bureau of Reclamation

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The Phoenix and Safford Districts realigned their boundaries in December 1991. Each District also adopted the appropriate portions of the other district's resource management plans. Administrative responsibilities for the Middle Gila River study area were transferred from the Safford District to the Phoenix Resource Area, Phoenix District.

A portion of segment 2 is in the Needle's Eye Wilderness. Preparation of a wilderness

management plan began in 1994.

The study area is in the Christmas Special Recreation Management Area. No management plan for the special recreation area has been prepared.

The Middle Gila River study area is in the Mescal Mountain, Christmas, Piper Springs, and Hidalgo Grazing Allotments. All of these are "C" (Custodial) management category allotments.

**TABLE MG-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE MIDDLE GILA
WILD AND SCENIC STUDY AREA UNDER OTHER DESIGNATIONS.**

MIDDLE GILA STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Needle's Eye Wilderness	2,480	29

2. Other Federal Agencies

The Bureau of Indian Affairs administers the San Carlos Apache Indian Reservation, which borders all of segments 1 and 2 and the upper

portion of segment 3. The reservation boundary is the centerline of the river for 20.5 miles of the

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

river study area beginning at river mile 0.5, below Coolidge Dam.

The Bureau of Reclamation withdrawals and Bureau of Land Management public domain share 19.1 miles with the San Carlos Apache Indian Reservation.

3. State of Arizona

The study area includes 1.4 miles of land administered by the Arizona State Land Department in segments 2 and 3. The study area also is in Arizona Fish and Game Department Management Unit 24A.

4. Private

Segment 3 includes 5.6 miles of private land.

D. SCOPING

Scoping meetings specifically highlighting the Middle Gila River study area were held in Winkelman April 12, 1993, Tucson April 13, 1993, and Phoenix April 14, 1993. Ten to 12 people attended the Winkelman meeting, 35 to 40 were at the Tucson meeting and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the Middle Gila River study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on mineral development
- Impacts on private property rights
- Impacts on future rights-of-way
- Impacts on public access
- Impacts on recreation
- Impacts on water rights
- Impacts on flow regimes

- Impacts on San Carlos Apache Indian Tribe
- Impacts on livestock grazing
- Impacts on the local population and economy
- Impacts of dual designation
- Impacts on the federal budget from this planning effort
- Impacts on air quality
- Impacts on the outstandingly remarkable scenic values
- Impacts on the outstandingly remarkable geologic values
- Impacts on the outstandingly remarkable fish and wildlife habitat values

Issues Considered but not Addressed

- Impacts on private property rights.

There are approximately 1,505 acres of private land in the river study area. There are 13 parcels of property. In addition, some residential and agricultural developments are present along the waterway on the private parcels in the river study area. Portions of residential and business areas of Winkelman and the adjacent copper mining operations are in the area.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

The issue of private property rights will not be discussed further.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Impacts on future rights-of-way.

The proposed study area contains the Highway 77 Right-of-way and the Hayden/Christmas utility corridor.

The policy of the Bureau of Land Management regarding rights-of-way for wild rivers is as follows:

New transmission lines, including natural gas lines and water lines are discouraged unless specifically authorized by other plans, orders, or laws. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are unavoidable, locations and construction techniques shall be selected to minimize adverse impacts to river values and fully evaluated during the site selection process. This issue will not be considered further.

- Impacts on public access.

The upper stretch from the Coolidge Dam to Dripping Spring Wash is remote and largely inaccessible. Nonetheless, segment 1 is accessed by a low-grade dirt road that follows the river for most of the stretch, exiting the study area by a bridge crossing near its lower end. The Hawk Spring Road enters the study area about two-thirds of the way down the segment.

The portion of segment 2 in the Needle's Eye Wilderness has no roads.

State Highway 77, a two-lane paved road, parallels the river along much of segment 3. Several short side-roads approach the shoreline from the highway. One other dirt road drops down to the river at the upper end of segment 3.

None of the alternatives would result in a change to public access in the Middle Gila River study area.

This issue will not be analyzed further.

- Impacts on recreation.

Recreation use in the entire river study area is considered to be moderate, approximately 1,000 to 1,500 visitor-use days annually. From Dripping Spring wash to Winkelman, the river parallels Highway 77 and receives a substantial amount of recreational use (approximately 2,500 to 3,000 visitor-use days annually). Portions of the river receive recreational use such as hunting, fishing, picnicking, camping, tubing/rafting and off-highway vehicle use.

No management actions associated with implementing the recommended alternative would affect recreation use in the study area.

This issue will not be considered further.

- Impacts on water rights.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

exchanges, negotiated agreements, or other appropriate arrangements.

A federal reserved right was granted to the portion of the river in the Needle's Eye Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this reserved right would be made and notification submitted to the State.

This issue will not be discussed further.

- Impacts on flow regimes.

The flow of the river study area has been largely controlled since 1928 by regulated releases from Coolidge Dam. Perennial surface flow is maintained during most years.

The perennial/regulated flow regimes of the Middle Gila River would not be affected by wild and scenic river designation.

This issue will not be considered further.

- Impacts on the San Carlos Apache Indian Reservation.

The San Carlos Indian Reservation boundary is the centerline of the river for 20.5 miles of the study area. The Reservation side of the river was not found eligible in the Safford District Resource Management Plan. There are 180 acres of reservation land in the eligible river study area.

No management actions associated with implementation of the recommended alternative would affect present or future uses or management of reservation lands.

This issue will not be considered further.

- Impacts on livestock grazing.

The Middle Gila River study area crosses portions of the Mescal Mountain, Christmas, Piper Springs and Hidalgo grazing allotments.

These allotments are primarily ephemeral/perennial operations.

Implementation of the alternatives would not affect the livestock operations in the study area. Therefore, livestock grazing will not be considered in detail.

This issue will not be considered further.

- Impacts on the local economy.

Employment and income would not be affected by implementation of the alternatives. No existing minerals operations, exploration, or leasing would be affected. If Congress were to designate the portions of the study area recommended in the alternatives, new activities could be developed in areas not otherwise closed to mineral entry by management provisions of the wilderness Area and Safford District Resource Management Plan.

National publicity associated with the wild and scenic river designation could be expected to increase tourism. Benefits to the local economy from increased tourism from designation of the Middle Gila River as a wild and scenic river cannot be estimated.

None of the management actions associated with the recommended alternative would affect the local mining and ranching industries.

This issue will not be considered further.

- Impacts of dual designation.

In this case dual designation would refer to a wild and scenic river designation for the Middle Gila River in the Needle's Eye Wilderness Area. This would have no environmental impact because management actions would not be duplicated, but would comply with the most stringent requirements.

This issue will not be considered further.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Impacts on the federal budget from this planning effort.

The Bureau of Land Management is required by the Wild and Scenic Rivers Act to study rivers under its administrative control.

The issue of impacts on the federal budget will not be discussed further.

- impacts on air quality.

The implementation of the management actions associated with any of the alternatives would not have impacts on air quality in the Middle Gila River study area because there would be no surface disturbance or development that would release particulate matter.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Middle Gila River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

Actions and uses for each alternative are described for minerals, lands, recreation, wildlife, vegetation, cultural resources, water, grazing, and social and economic conditions.

The following alternatives are addressed:

Recommended alternative/part suitable
All suitable
No action/not suitable

B. RECOMMENDED ALTERNATIVE/PART SUITABLE

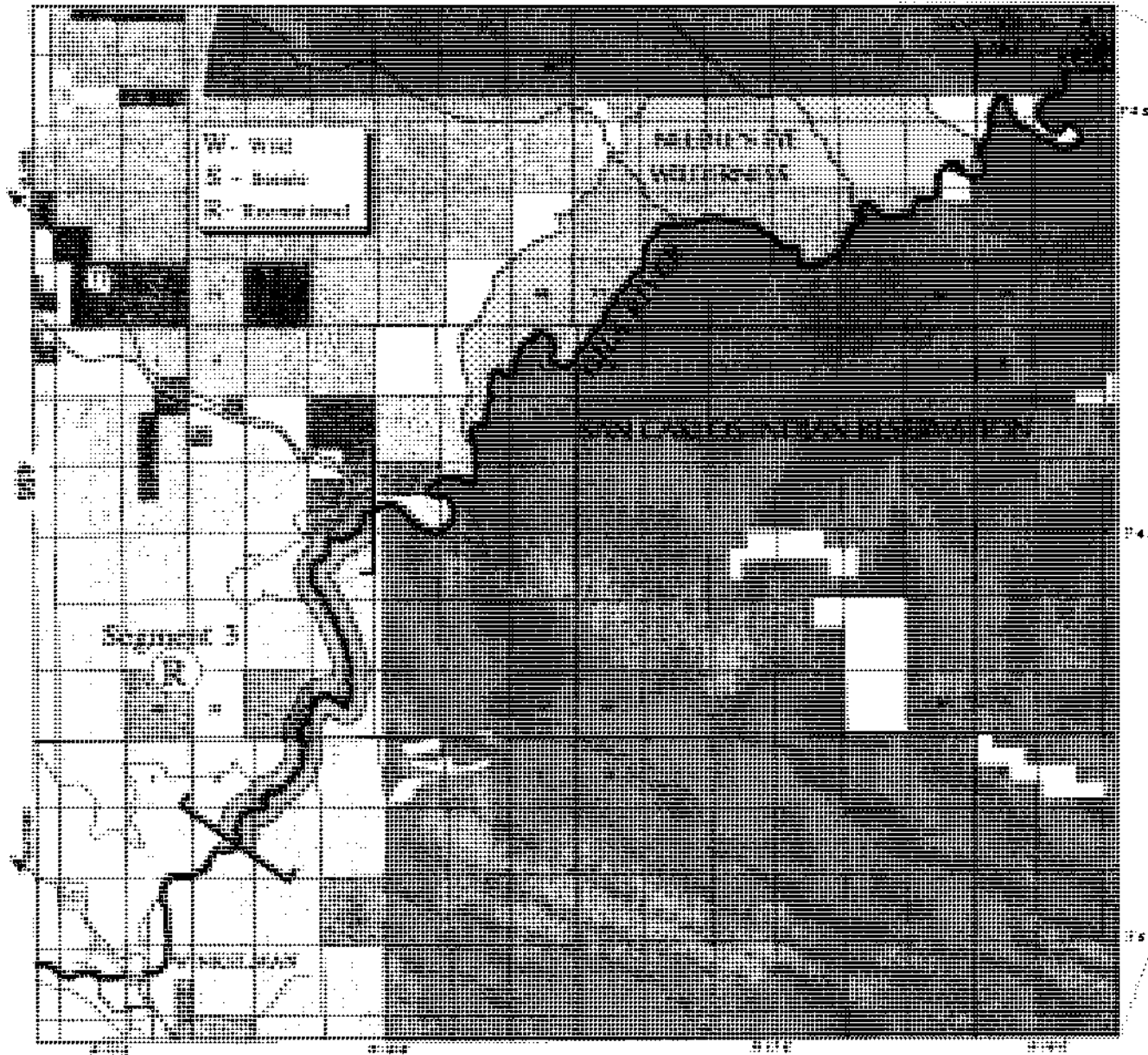
The recommended alternative determines that only a portion of segment 3, totalling 7.5 miles, in the Middle Gila River study area, is suitable and should be recommended to Congress for inclusion in the National Wild and Scenic Rivers System. The remaining 6.5 miles of segment 3 and all of segments 1 and 2 are determined to be nonsuitable and are not recommended under this alternative. The recommended classification for segment 3 remains as recreational.

Wild and Scenic River management actions

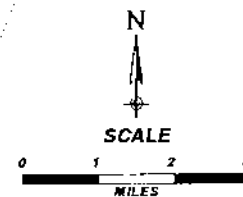
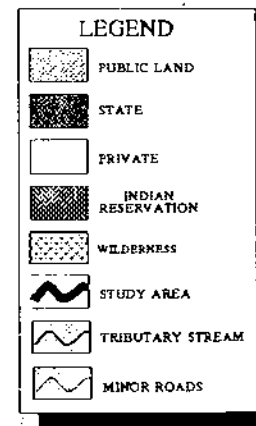
Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would be initiated for a recreational river designation. Where there might be overlap with ongoing actions, the most stringent would be followed.

- New mining claims and mineral leases would be prohibited. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- New mining claims would be allowed and existing operations could continue. Reasonable mining claim and mineral lease access would be permitted.
- Patents would be restricted to the mineral estate.
- Water quality would be maintained or improved.
- New hydroelectric power facilities would be prohibited.
- Existing low dams, diversion works, riprap, and other minor structures would be permitted.
- New waterway structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
- Existing parallel roads would be maintained.
- Motorized travel is permitted.

MIDDLE GILA RIVER (Recommended Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
PHOENIX RESOURCE AREA

October 1994

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreation use would be encouraged but public use and access may be regulated and distributed to protect and enhance recreational river values.
- New minor structures for fish and wildlife habitat protection would be permitted.
- New rights-of-ways, transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- Instream flow would be quantified. An assessment would be developed in order to secure instream flows associated with protecting the outstandingly remarkable values.
- Livestock grazing would continue.
- Off-highway vehicle use would be limited to existing roads and trails.
- Visitor use in the riparian area would be managed to prevent permanent damage to the vegetation.
- Segment 3 would be managed as a Visual Resource Management Class II area. Management activities would be limited to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.
- Management efforts would focus on enhancing biodiversity by managing riparian/aquatic habitat as priority areas. All activities in the study area would be managed so as not to conflict with this goal.
- All management actions would, by design, avoid impacting nesting bald eagles.
- Salt cedar and other exotic plants would be monitored and controlled on approximately 610 acres.

Ongoing management actions

Ongoing management actions in the Middle Gila River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Safford District Resource Management Plan and Needles Eye Wilderness Plan, when completed.

- Mineral materials would not be sold in the riparian zone in the segment.
- Surface occupancy for mineral leases would not be permitted in riparian areas.
- Private land in segment 3 would be acquired on a willing seller-willing buyer basis. State land exchanges would be pursued.
- The maximum length of stay for recreational purposes would be 14 days.
- Desired plant communities would be identified in activity plans.
- Woodcutting would be prohibited on 3,890 acres in the study area.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that the entire 32-mile length of the Middle Gila River study area is suitable and should be recommended to Congress for inclusion in the National Wild and Scenic Rivers System. The Middle Gila River study area has three segments. Segment 1 (5.5 miles) is recommended as Recreational. The 12.5-mile long segment 2 is recommended as Wild. Segment 3, 14 miles long, is recommended as Recreational.

Wild and Scenic River management actions

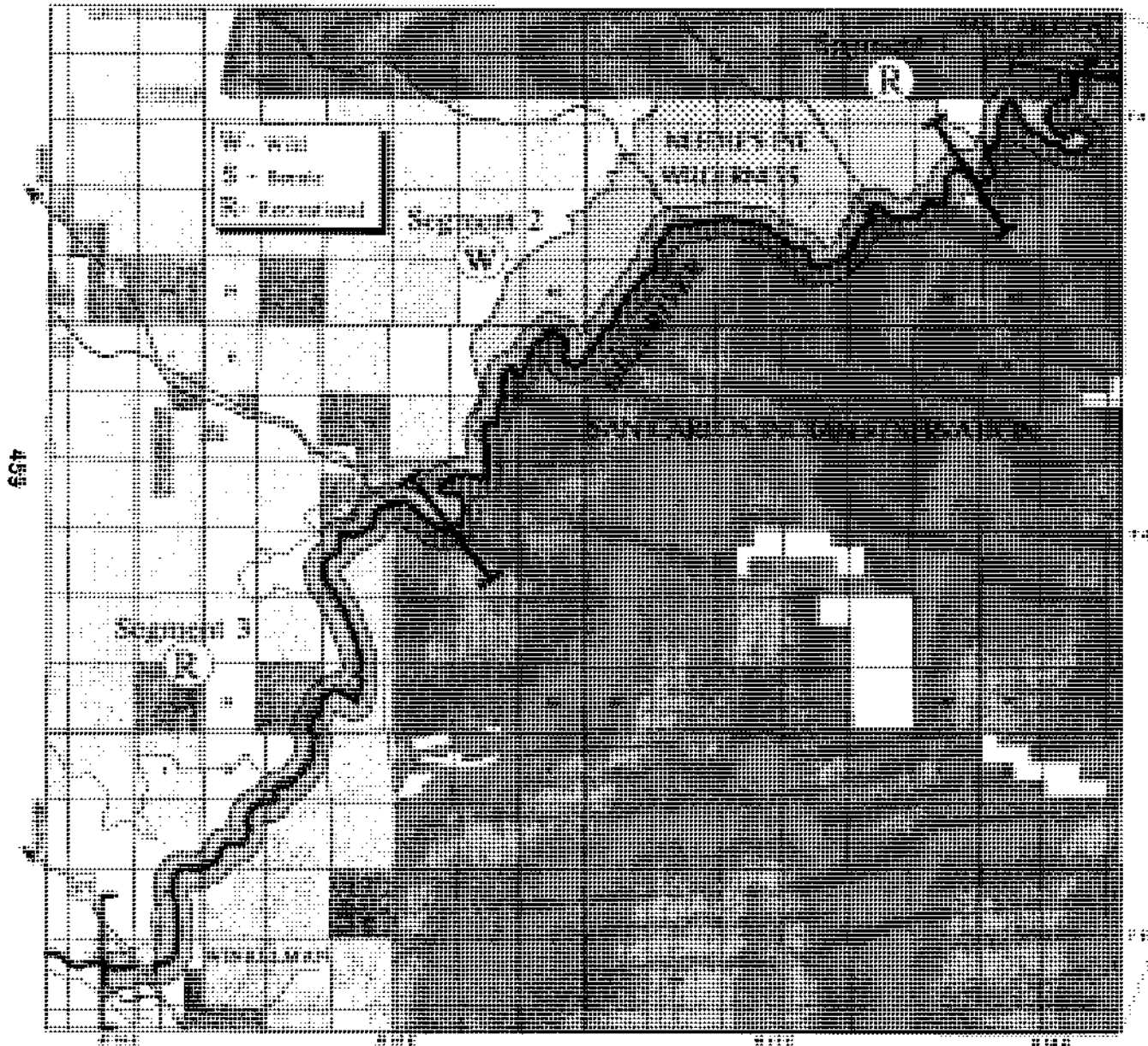
Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would be initiated for a wild and scenic river designation. Where there might be overlap with ongoing actions, the most stringent would be followed.

- In Wild segments new mining claims and mineral leases would be prohibited.
- Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- In Recreational segments new mining claims would be allowed and existing operations could continue.
- Reasonable mining claims and mineral lease access would be permitted.
- Patents would be restricted to the mineral estate.

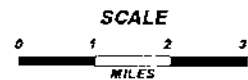
- Water quality would be maintained or improved.
- New hydroelectric power facilities would be prohibited.
- In Wild segments new flood control dams, levees, or other works would be prohibited. All water supply dams and major diversions would be prohibited.
- In Recreational segments new waterway structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
- Existing low dams, diversion works, riprap, and other minor structures also would be permitted.
- In Wild segments construction of new roads or trails for motorized travel would be prohibited. Normally, motorized use would be restricted in a Wild river area. Exceptions could be for search and rescue and other emergency situations.
- In Recreational segments motorized travel is permitted and existing parallel roads would be maintained.
- In Wild segments campgrounds, interpretive centers, or administrative headquarters in the river corridor would be prohibited. In Recreational segments interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreational use would be encouraged but public use and access may be regulated and distributed to protect and enhance Recreational river values.
- New minor structures for fish and wildlife habitat protection would be permitted in Recreational segments.

MIDDLE GILA RIVER

(All Suitable Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
PHOENIX RESOURCE AREA

October 1994

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

- New rights-of-ways, transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-ways.
- Instream flow would be quantified. An assessment would be developed in order to secure instream flows associated with protecting the outstandingly remarkable values.
- Livestock grazing would continue.

Ongoing management actions

Ongoing management actions in the Middle Gila River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Safford District Resource Management Plan and Needles Eye Wilderness Plan, when completed.

- 2,240 acres of segment 2, which is in the Needle's Eye Wilderness, would be subject to the provisions of the Wilderness Act, which prohibits new mining activity or mineral leasing. (In the remaining 390 acres in segment 2 new mining claims and mineral leasing would not be prohibited in accordance with the Wild and Scenic River Act.)
- Mineral materials would not be sold in the riparian zone on 3,500 acres within the study area.
- Surface occupancy for mineral leases would not be permitted in riparian areas on 3,500 acres.
- 2,205 acres of private and State lands would be acquired on a willing seller-willing buyer basis or exchange.
- The Hayden/Christmas utility line is a one-mile wide corridor. Any future major utility rights-of-way proposals would be encouraged to

use this corridor.

- The maximum length of stay for recreational purposes would be limited to 14 days.
- Off-highway vehicle use would be limited to existing roads and trails on 3,500 acres in segments 1 and 3.
- Visitor use in the riparian areas of the study area would be managed to prevent permanent damage to the vegetation.
- The portion of the study area in the Needle's Eye Wilderness would be managed as Visual Resource Management Class I. Management activities would be limited to those which preserve the characteristic landscape.
- The nonwilderness portions of the study area would be managed as a Visual Resource Management Class II area. Management activities would be limited to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.
- Management efforts would focus on enhancing biodiversity by managing riparian/aquatic habitat as priority areas. All activities in the study area would be managed so as not to conflict with this goal.
- All management actions would, by design, avoid impacting nesting bald eagles.
- Salt cedar and other exotic plants would be monitored and controlled on approximately 610 acres, according to the Safford District Resource Management Plan.
- Woodcutting would be prohibited on 3,890 acres in the study area.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory

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of the potentially affected area would be completed.

- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

D. NO ACTION/NOT SUITABLE ALTERNATIVE

The no action alternative determines that the Middle Gila River study area is not suitable and should not be recommended for inclusion in the National Wild and Scenic Rivers System.

Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Wild and Scenic River management actions

The no action/not suitable alternative determines the entire study area to be nonsuitable and does not recommend designation. Under this alternative there would be no wild and scenic river management actions.

Ongoing management actions

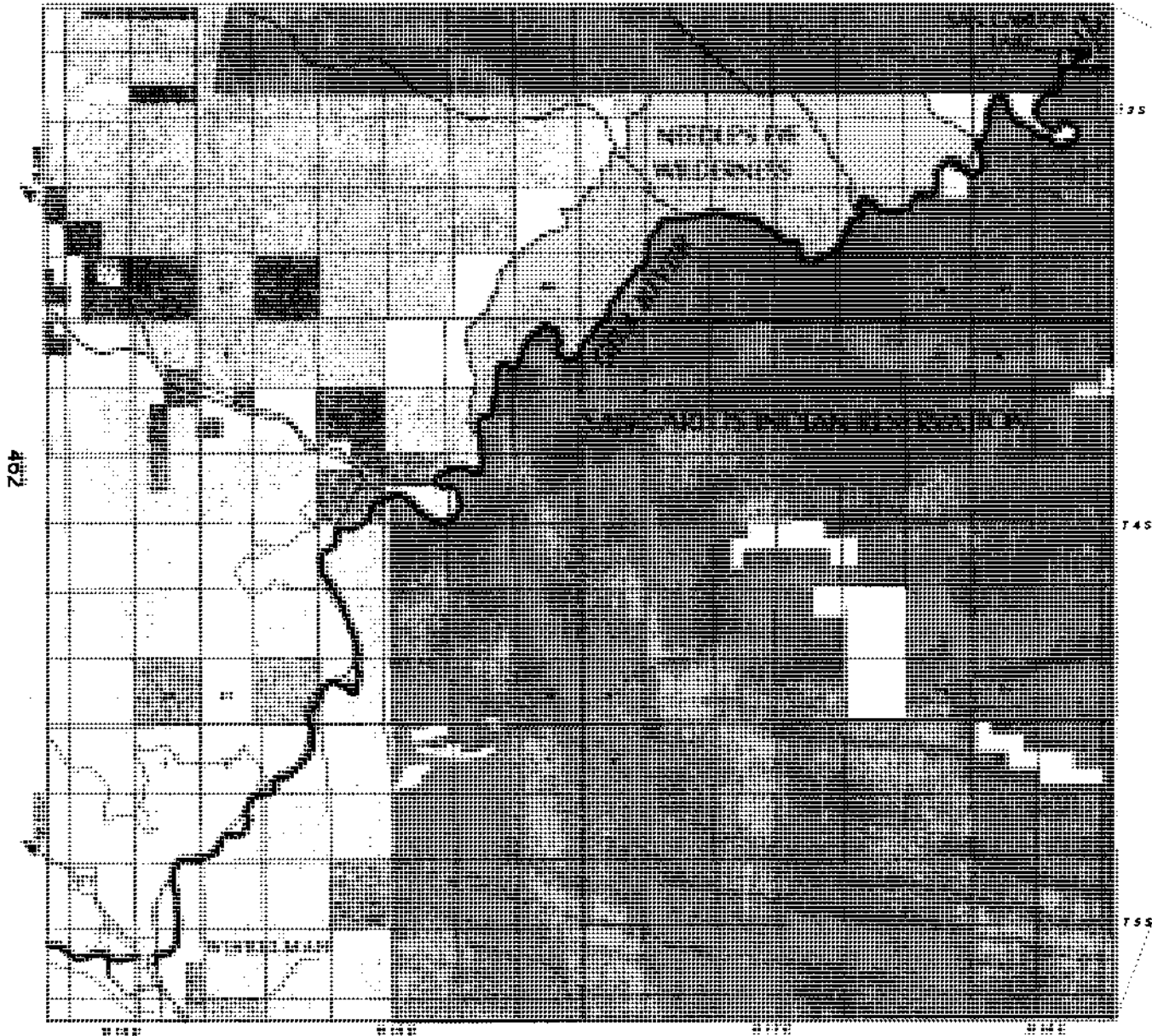
Resource management in the Middle Gila River study area would continue to follow the management prescriptions contained in the Safford District Resource Management Plan. Management of the Needle's Eye Wilderness would continue to be subject to wilderness

laws, the Bureau of Land Management's 8560 Wilderness Management Manual and the Needle's Eye Wilderness Management Plan, when completed.

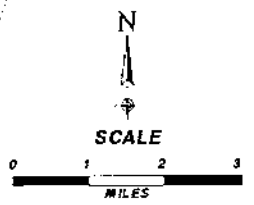
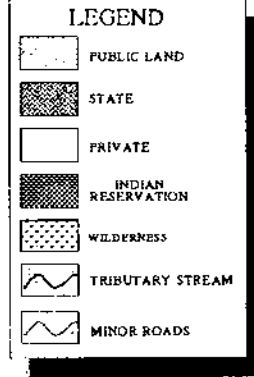
- On 2,240 acres in segment 2, which is in the Needle's Eye Wilderness, would be subject to the provisions of the Wilderness Act, which prohibits new mining activity or mineral leasing.
- New mining claims on a total of 3,890 acres in the study area would be allowed and existing operations would be allowed to continue.
- Mineral materials would not be sold in the riparian zone on 3,890 acres within the study area.
- Surface occupancy for mineral leases would not be permitted in riparian areas on 3,890 acres.
- In segments 1 and 3 and the nonwilderness portion of segment 2, roads and trails would be required to conform to construction and maintenance standards.
- Private land would be acquired on a willing seller-willing buyer basis. State land exchanges would be pursued.
- The existing Hayden/Christmas utility line is a one-mile wide corridor. Any major utility rights-of-way proposals would be encouraged to use this corridor.
- Campgrounds, and picnic areas would be allowed in proximity to the river in segments 1 and 3 and the nonwilderness portion of segment 2.
- Recreation use including hiking, fishing, hunting, and river recreation activities would be encouraged in the Middle Gila River study area.
- The maximum length of stay for recreational purposes would be limited to 14 days.

MIDDLE GILA RIVER

(No Action Alternative)



LOCATION DIAGRAM



UNITED STATES
 DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT
 PHOENIX DISTRICT
 PHOENIX RESOURCE AREA
 October 1994

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- Visitor use in the riparian area would be managed to prevent permanent damage to the vegetation.
- The portion of the study area in the Needle's Eye Wilderness would be managed as Visual Resource Management Class I. Management activities would be limited to those which the characteristic landscape. The nonwilderness portions of the study area would be managed as a Visual Resource Management Class II area. Management activities would be limited to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.
- Construction and maintenance of minor structures for the protection, conservation or rehabilitation of fish and wildlife habitat provided they do not affect the free-flowing characteristics of the Middle Gila River.
- Management efforts would focus on enhancing biodiversity by managing riparian/aquatic habitat as priority areas. All activities in the study area would be managed so as not to conflict with this goal.
- All management actions would, by design, avoid impacting nesting bald eagles.
- Salt cedar and other exotic plants would be monitored and controlled on approximately 610 acres, according to the Safford District Resource Management Plan.
- Desired plant communities would be identified in activity plans.
- Woodcutting would be prohibited on 3,890 acres in the study area.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Management of groundwater would be to conserve water for prudent resource management purposes. Water quality would be maintained at or above established standards for designated uses to meet management goals for each water source.
- The Middle Gila River would be evaluated to determine the quantities of instream flow needed to meet resource management objectives.

E. ALTERNATIVES CONSIDERED BUT REJECTED

The Arizona Rivers Coalition identified an alternative very similar to the all suitable alternative discussed in this document. The Coalition's alternative consisted of a river study area totalling 27.5 miles and stretching from Coolidge Dam downstream to a point approximately 3.5 miles upstream from Winkelman. The study area included three river segments that were similar in length and location to the Bureau of Land Management proposal.

The Coalition's recommended classification for each segment matched those in the all suitable alternative.

The outstandingly remarkable values identified by the Arizona Rivers Coalition included scenic,

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recreation, geologic, and fish and wildlife habitat.

Another alternative considered by the Bureau of Land Management would have eliminated commercial features from the study area. Eliminated from this alternative would have been the powerline in segment 2, and the residential and commercial areas near Winkelman (including the adjacent copper mining operations) in segment 3.

This alternative was rejected because the impacts of this scenario are adequately addressed in the all suitable alternative.

An alternative that excluded the upstream portion of segment 1 from a wild and scenic recommendation was suggested by the Cyprus Amax Mineral Company (see letters 36 and 82). This alternative was considered, but since the impacts from its implementation would be identical to those addressed in the no action alternative, further discussion is unwarranted.

No other alternatives were submitted or considered.

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**TABLE MG-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative	All suitable	No action (not suitable)
Impacts on Outstandingly Remarkable Scenic and Geologic Values	Possible minor adverse impacts from mining operations; long-term legislative protection on 1,780 acres	Possible minor adverse impacts from mining operations	Possible minor adverse impacts from mining operations
Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values	Possible minor adverse impacts from mining operations; long-term legislative protection on 1,780 acres	Possible minor adverse impacts from mining operations	Possible minor adverse impacts from mining operations
Impacts on Mineral Development	No impact on mineral development	Possible minor impacts on 390 acres in Wild	No impact on mineral development

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Middle Gila River study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Safford District Resource Management Plan, the Safford District Wilderness Environmental Impact Statement, and the Middle Gila River study area suitability determination assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

Visual resource evaluation of the upper portion of the area has resulted in an "A" rating in scenic quality under the Bureau of Land Management's Visual Resource Management System. The area is managed as Class II with the objective of retaining the existing character of the landscape. The remaining portion of the river canyon is also highly scenic. The effect of the river's down-cutting over the centuries is truly a remarkable feature.

This portion of the Gila River has cut a narrow canyon up to 2000 feet deep through several rugged desert mountain ranges. From the dam, the river cuts through the Mescal Mountains forming a deep and narrow gorge, then passes through the open terrain of the southern end of the Dripping Spring Valley and enters another canyon area as it flows through the southern Dripping Spring Mountains to Winkelman. The canyon in the Mescal Mountains contains several deeply incised and constricted passages including the Needle's Eye. Steeply dipping Paleozoic limestone forms much of the geology of the upper half of the study area while volcanic formations make up the study area's lower portion.

The Middle Gila River study area supports a variety of wildlife, including 35 mammals, 35 reptiles, seven native fish and eight amphibian

species. More than 150 bird species ranging from permanent residents to rare or migrant species may be found in this area.

Bald eagles (*Haliaeetus leucocephalus*) are known to nest in the upper section of the study area along the river. Peregrine falcons (*Falco peregrinus*) are known to nest on cliffs by Coolidge Dam above the study area. Black hawks (*Buteo anthracinus*) and zone-tailed hawks (*Buteo albonotatus*) are known to occur along the river in the study area. Other special status wildlife species that may occur in the study area include southwestern willow flycatchers (*Empidonax traillii extimus*), snowy egret (*Leucophox thula*), osprey (*Pandion haliaetus*), Mississippi kite (*Ictinia mississippiensis*), yellow-billed cuckoo (*Coccyzus americanus*), belted kingfisher (*Ceryle alcyon*) and Sonoran desert tortoise (*Gopherus agassizii*).

According to the U.S. Fish and Wildlife Service the threatened spikedace (*Meda fulgida*), proposed as endangered, and candidate category 1 cactus ferruginous pygmy-owl (*Glaucidium brasilianum cactuom*) may also occur in the study area.

Fish and wildlife other than those mentioned above also rely on the river for habitat. Warm-water fish such as channel catfish (*Ictalurus punctatus*), flathead catfish (*Pylodictus olvaris*), largemouth bass (*Micropterus salmoides*), green sunfish (*Lepomis cyanellus*) and carp (*Cyprinus carpio*) are found in the river. A large number of waterfowl occur along this stretch of the river.

Many species of both game and non-game animals such as mule deer (*Odocoileus hemionus*), white-tailed deer (*Odocoileus virginianus*), javelina (*Tayasu tajacu*), desert bighorn sheep (*Ovis canadensis nelsonii*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*), gray fox (*Urocyon cinereargenteus*), ringtail (*Bassariscus astutus*), coati (*Nasua*

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

narica), mourning dove (Zenaidura macroura) and quail (Lophortyx gambelii) may frequent the study area.

B. MINERALS

The mineral and energy resources of the river study area are not fully known. However, the upper portion of the area was studied by the U.S. Geological Survey and Bureau of Mines and reported in Mineral Resources of the Needles Eye Wilderness Study Area, Gila County, Arizona (1987). The report identified no mineral reserves or resources in the study area. An area of moderate potential for metals in vein or replacement deposits is located in the river study area in Sections 35 and 36, T. 3 S., R. 16 E., and sections 1 and 2, T.4 S., R. 16 E. the remainder of the upper portion of the river study area has a low mineral resource potential for metals, non-metals and fuels.

The remainder of the upper portion of the river study area is reported as having a low mineral resource potential. The Arizona Mining Association states that most of the river study area traverses an area of high mineral potential along the San Carlos Indian Reservation boundary.

The northern portion of segment 2 is in the Needle's Eye Wilderness and would be subject to the provisions of the Wilderness Act, which prohibits new mining activity or mineral leasing.

The lower river study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten. No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. Altogether, there are 191 active mining claims, all in segment 3.

No structures favorable for the accumulation of

oil and gas occur in the study area and no oil and gas leases or lease applications are existing. Though Mescal Warm Spring is near, no geothermal source is likely in the river study area.

C. LANDS

The upper stretch of the study area from Coolidge Dam to Dripping Spring Wash is remote and largely inaccessible. However, segment 1 is accessed by a low-grade dirt road that follows the river for most of the stretch, exiting the study area by a bridge crossing near its lower end. The Hawk Spring Road enters the study area about two-thirds of the way down the segment.

State Highway 77, a two-lane paved road, parallels the river along segment 3. Several short side-roads approach the shoreline from the highway. One other dirt road drops down to the river at the upper end of segment 3.

Coolidge Dam, a power plant and ancillary facilities are located in segment 1. A 44 kV powerline crosses about two miles of segment 2 and parallels the river near the mouth of Mescal Creek. A road was constructed to one of the towers some years ago but is no longer passable. The road does not reach the river.

The Safford District Resource Management Plan designated the existing Hayden/Christmas utility line as a 1-mile wide corridor.

Arizona Public Service Company has expressed concern about expanding the right-of-way width for their Coolidge Dam-Hayden corridor. They are also concerned about present and future Hayden and SCIPP area distribution lines.

There are approximately 1,505 acres of private land in segment 3 of the river study area. Altogether, there are 13 parcels of property. In addition, some residential and agricultural development is present along the waterway on

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the private parcels in the river study area. Portions of residential and business areas of Winkelman and the adjacent copper mining operations are in segment 3.

D. RECREATION

Recreation use in the entire river study area is considered to be moderate, approximately 2,500 to 3,000 visitor-use days annually. From Dripping Spring Wash to Winkelman, the river parallels Highway 77 and receives a substantial amount of recreational use (approximately 1,000 to 1,500 visitor-use days annually). Portions of the river receive recreational use such as fishing, swimming, picnicking, camping, and tubing/rafting. Two undeveloped picnic and fishing sites maintained by Bureau of Land Management are adjacent to the river in NW 1/4 Section 28 T. 4 S., R. 16 E and SW 1/4 Section 5 T. 5 S., R. 16 E.

Safety concerns have been expressed over recreation uses of the river due to past drownings and search and rescue incidents. Trees and shrubs growing in the river and the river's remoteness through the Mescal Mountains have contributed to the hazardous situation.

The 8,760-acre Needle's Eye Wilderness is located about 20 miles southeast of Globe, Arizona, bordering north of segment 2, on the river. The San Carlos Indian Reservation is to the south. The Mescal Mountains trend northwest across the center of the area where the southwest flank forms a spectacular striped dip-slope of Paleozoic limestone over 2,500 feet high. The river slices through this range and enters three canyons with 1,000 foot walls, giving the name to the wilderness area. A deep, entangled riparian zone covers the narrow river channel, forming the southern boundary of this area.

E. VEGETATION

The uplands in the study area are dominated by

desert shrub vegetation including saguaro (*Cereus giganteus*), ocotillo (*Fouquieria splendens*), paloverde (*Cercidium floridum*) and other Sonoran species.

The Middle Gila segment has small strips of a cottonwood-willow (*Populus* spp.-*Salix* spp.) communities. This community is characterized by a gallery forest of Fremont cottonwood (*Populus fremontii*) and Goodding willow (*Salix gooddingii*).

This community is sometimes intermixed with mesquite (*Prosopis juliflora*) and salt cedar (*Tamarisk pentandra*) as well as shrubs, grasses and forbs. The primary grass species associated with it are bermuda grass (*Cynodon dactylon*) and bullrush (*Scirpus* spp.). Until recently, years of controlled water releases including periods of low flow and lack of large floods have created extremely thick growth along the river in the upper portion of the study area. Flooding during January-March of 1993 cleared the river channel of most vegetation.

In many places large trees are established in the river channel and low branches reach out into or stretch completely across the flow. The channel in the lower half of the study area is also affected by the dense growth, though not so extensively.

Recent inventories indicate the riparian vegetation is in unsatisfactory ecological condition.

F. CULTURAL RESOURCES

The Gila River from Safford to Phoenix prehistorically was one of the most densely populated areas in the Southwest. Little is known about cultural resources that may exist in the Middle Gila River study area, since no archaeological surveys have been conducted there. However, the potential for cultural resources can be inferred from the results of intensive surveys along the river directly west of the study area from Winkelman to Kelvin, and to

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

the east around the margins of San Carlos Lake.

More than 400 prehistoric and historic sites have been recorded in these areas. Prehistoric sites include pithouse and pueblo villages, ball courts, and agricultural sites, attributed primarily to Hohokam and Salado occupations from A.D. 1100 to 1450 A.D. Historic sites include mines, structures and roads. Since it is bounded by areas containing high densities of cultural resources, the study area likely contains many sites. Site densities in relatively open terrain are expected to exceed those in steep, narrow canyons in the study area.

G. WATER RESOURCES

The flow of the river study area has been largely controlled since 1928 by regulated releases from Coolidge Dam. Perennial surface flow is maintained during most years. The 382 square mile drainage area between Coolidge Dam and Winkelman contributes major amounts of water to the Gila River only during and shortly after significant rainfall events. The record peak flow at Winkelman of 55,000 cubic feet per second on August 9, 1944 included only a 500 cubic feet per second release from Coolidge Dam. The median of the yearly mean discharges over 46 years at the U.S. Geological Survey gage at Winkelman was 190 cubic feet per second.

The 1987-1991 assessment by the Arizona Department of Environmental Quality lists the Gila River below Coolidge Dam as being in "partial-support" of State surface water quality standards. The only noted water quality concern was elevated levels of total dissolved

solids and salts. The Bureau of Water Quality Control and the Arizona Department of Environmental have repeatedly tested the Gila River for violations of state water quality standards from mining-related activities.

The river flowing through this area has retained its relatively natural character. Much of the river in segment 1 has been affected by operations of Coolidge Dam.

A federal reserved water right was granted to the portion of the river in the Needle's Eye Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this reserved right would be made and notification submitted to the state.

The State of Arizona has not made a determination of navigability of the Middle Gila River. However, the river is on the list of priority streams identified for preliminary evaluation.

H. LIVESTOCK GRAZING

The Middle Gila River study area falls within the Mescal Mountain, Christmas, Piper Springs and Hidalgo grazing allotments. All of these are "C" (custodial) management category allotments. These allotments are primarily ephemeral/perennial operations. For the most part, the area has been historically overgrazed by livestock, resulting in the current poor condition of the rangeland and riparian zone. Within the river study area, these allotments total 7,140 acres, with 85 percent of the acreage public land administered by Bureau of Land Management. There are 619 animal unit months authorized on the public land portion of these allotments.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Middle Gila River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated Wild and Scenic River.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine.

Large mining operations would be those involving more than five acres.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative determines a portion of segment 3, totalling 7.5 miles, in the Middle Gila River study area is suitable and recommends it to Congress for inclusion in the National Wild and Scenic Rivers System. The remaining 6.5 miles of segment 3 and all of segments 1 and 2 are determined to be nonsuitable and are not recommended to Congress for inclusion.

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The recommended classification for segment 3 is Recreational.

Under the recommended alternative, the outstandingly remarkable values would receive the protection of special legislation on 1,780 acres.

Impacts on Outstandingly Remarkable Scenic and Geologic Values

The study area's remarkable scenic values are associated with its geology. Because of this the impacts on the two outstandingly remarkable values are discussed in a single section.

The lower river study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten. No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. Altogether, there are 191 active mining claims, all in segment 3.

No structures favorable for the accumulation of oil and gas occur in the study area and no oil and gas leases or lease applications are existing. Though Mescal Warm Spring is near, no geothermal source is likely in the river study area.

Management of segment 3 as Recreational would allow new mining claims. Claims would be restricted to the mineral estate only. This would ensure federal protection of the surface estate after mining has ceased. Existing minerals operations would be allowed to continue.

New dams, levees, and waterway diversions would be prohibited. This would provide protection to the outstandingly remarkable scenic and geologic values that are associated with the river.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, segment 3 would be managed as a Visual Resource Management Class II Area. Scenic values would be protected by limiting management activities to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.

Mineral materials would not be sold in the riparian zone within the segment. Surface occupancy for mineral leases would not be permitted in riparian areas.

The Safford District Resource Management Plan provides for acquiring private land in segment 3 on a willing seller-willing buyer basis. State land exchanges would be pursued. Acquiring the state and private lands in segment 3 would benefit scenic values by providing federal protection.

In accordance with the Safford District Resource Management Plan, instream flow monitoring and a comprehensive assessment would be conducted to determine the minimum flow required to support the outstandingly remarkable scenic, geologic, and fish and wildlife habitat values in the Middle Gila River study area and to meet the Arizona Department of Water Resources requirements for a state-appropriated water right for the Middle Gila River.

Given the moderate to high mineral potential and current mining activity in the study area, consideration of the mining scenario is appropriate.

The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained.

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Mining activities involving new structures, ground disturbance and degradation of habitat through a decline in water quality could detract from the scenic quality of the study area.

The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values.

Scenic values associated with clean, clear water would be protected by monitoring water quality to meet federal and state water quality standards.

• Conclusion

The outstandingly remarkable scenic and geologic values would receive special long-term legislative protection from the Wild and Scenic Rivers Act on 1,780 acres.

Implementation of the recommended alternative could have indirect minor adverse impacts on the study area's outstandingly remarkable scenic and geologic values from mining operations.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The outstandingly remarkable fish and wildlife habitat in the Middle Gila River study area provides a home for a wide variety of fish, federally-listed threatened or endangered birds, mammals and reptiles.

Management of segment 3 as Recreational would allow new mining claims. Claims would be restricted to the mineral estate, ensuring federal protection of the surface estate after mining has ceased. Existing minerals operations would be allowed to continue.

New dams, levees, and waterway diversions would be prohibited. This would provide protection to the outstandingly remarkable fish

and wildlife habitat values that are associated with the river.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. In accordance with the Safford District Resource Management Plan, efforts would focus on enhancing biodiversity by managing riparian/aquatic habitat as priority areas. All activities in the study area would be managed so as not to conflict with this goal. All management actions would, by design, avoid impacting nesting bald eagles.

In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone within the segment. Surface occupancy for mineral leases would not be permitted in riparian areas.

The 1987-1991 assessment by the Arizona Department of Environmental Quality lists the Gila River below Coolidge Dam as being in "partial-support" of state surface water quality standards. The only noted water quality concern was elevated levels of total dissolved solids and salts.

The Arizona Bureau of Water Quality Control and the Arizona Department of Environmental Quality have repeatedly tested the Middle Gila River for violations of state water quality standards from mining-related activities.

Given the moderate to high mineral potential and current mining activity in the study area, consideration of the mining scenario is appropriate.

The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained. These mining operations could indirectly contribute to the degradation of outstandingly remarkable fish

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and wildlife habitat through spills, excavations, and tailings dumps. Mining activity outside of riparian zones could affect outstandingly remarkable fish and wildlife habitat values causing a loss of fish population or degradation of habitat through a decline in water quality.

- Conclusion

The outstandingly remarkable fish and wildlife habitat values would receive special long-term legislative protection on 1,780 acres from the Wild and Scenic Rivers Act.

Implementation of the recommended alternative could have minor adverse impacts on the study area's outstandingly remarkable fish and wildlife habitat values from mining operations.

Impacts on Minerals Development

Segment 3 of the study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten. No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. Altogether, there are 191 active mining claims, all in segment 3.

No structures favorable for the accumulation of oil and gas occur in the study area and no oil and gas leases or lease applications are existing.

The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained. Under the recommended alternative, new mining claims in segment 3 would be allowed and existing operations would be allowed to continue.

In accordance with the Wild and Scenic Rivers

Act, patents would be restricted to the mineral estate and not the surface estate.

Other actions that would apply are listed in the ongoing management activities described in Chapter II. In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone within the segment and surface occupancy for mineral leases would not be permitted in riparian areas.

- Conclusion

There would be no adverse impacts to minerals development from the implementation of the recommended alternative.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Middle Gila River study Area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with land use plans.

Cumulative impacts associated with implementation of the recommended alternative would be negligible due to the constraints of the Needle's Eye Wilderness Area and the Safford District Resource Management Plans.

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Irretrievable and irreversible commitments of resources

Under the recommended alternative there are no irretrievable and irreversible commitments of resources. The Resource Management Plan is an administrative action that can be revised as needs change. The wild and scenic river designation can be revoked by Congress.

Unavoidable adverse effects

There would be no unavoidable adverse effects from implementation of the recommended alternative.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

Under the all suitable alternative the outstandingly remarkable values would receive the protection of the special legislation in the Wilderness Act (Needles Eye Wilderness Area) and the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Scenic and Geologic Values

The study area's remarkable scenic values are associated with its geology. Because of this the impacts on the two outstandingly remarkable values are discussed in a single section.

A report by the U.S. Geological Survey and Bureau of Mines on the upper portion of the area identified no mineral reserves or resources in the study area (Mineral Resources of the Needles Eye Wilderness Study Area, Gila County, Arizona, 1987). An area of moderate potential for metals in vein or replacement

deposits is located in the river study area in Sections 35 and 36, T. 3 S., R. 16 E., and sections 1 and 2, T.4 S., R. 16 E. the remainder of the upper portion of the river study area has a low mineral resource potential for metals, non-metals and fuels. Although the remainder of the upper portion of the river study area is reported as having a low mineral resource potential, the Arizona Mining Association states that most of the river study area traverses an area of high mineral potential along the San Carlos Indian Reservation boundary.

The northern portion of segment 2 is in the Needle's Eye Wilderness and would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

The lower river study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten. No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. Altogether, there are 191 active mining claims, all in segment 3.

No structures favorable for the accumulation of oil and gas occur in the study area and no oil and gas leases or lease applications are existing.

Under the all suitable alternative on 390 acres in segment 2 outside of Wilderness new mining claims and mineral leasing would be prohibited in accordance with the Wild and Scenic River Act. This would provide long-term protection to the outstandingly remarkable scenic and geologic values from any mineral activities conflicts in the segment.

On the 3,500 acres in Recreational segments 1 and 3, new mining claims and existing operations would be allowed to continue, according to the Wild and Scenic Rivers Act.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

New mining claims patents would be restricted to the mineral estate, ensuring long-term protection of the outstandingly remarkable scenic and geologic values through federal management of the surface estate after the terms of the lease have been fulfilled.

New dams, levees, and waterway diversions would be prohibited. This would provide protection to the outstandingly remarkable scenic and geologic values that are associated with the river.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, under the All Suitable and according to the Safford District Resource Management Plan, the portion of the study area in the Needle's Eye Wilderness would be managed as Visual Resource Management Class I. Scenic values would be protected by limiting management to those that preserve the characteristic landscape.

Segment 3 would be managed as a Visual Resource Management Class II area. Scenic values would be protected by limiting management activities to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.

A total of 1,505 acres of private land in segment 3 would be acquired on a willing seller-willing buyer basis. State land exchanges on a total of 700 acres would be pursued. Acquiring the state and private lands in the study area would benefit scenic values by providing federal protection.

The 2,240 acres of segment 2, which is in the Needle's Eye Wilderness, would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

In accordance with the Safford District Resource Management Plan, mineral materials would not

be sold in the riparian zone on 3,500 acres within the study area and surface occupancy for mineral leases would not be permitted in riparian areas on 3,500 acres.

These management actions would protect the scenic values in the study area by prohibiting or restricting surface disturbing activities.

The lands in the study area outside the riparian area are open to mineral entry and mineral leasing. Although the suitability assessment states that there currently are no mining claims or mineral leases in the study area and none are anticipated in the foreseeable future (Bureau of Land Management 1993), consideration of the mining scenario is appropriate.

The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained. Mining activities involving new structures, ground disturbance and degradation of habitat through a decline in water quality could detract from the scenic quality of the study area. The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values.

• Conclusion

The outstandingly remarkable scenic and geologic values would receive special long-term legislative protection from the Wild and Scenic Rivers Act on 3,890 acres.

Implementation of the all suitable alternative could have minor indirect adverse impacts on the study area's outstandingly remarkable scenic and geologic values from mining operations.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The remarkable fish and wildlife habitat in the Middle Gila River study area is home for a wide variety of fish, federally-listed threatened or endangered birds, mammals and reptiles.

Under the all suitable alternative on 390 acres in segment 2 outside of wilderness new mining claims and mineral leasing would be prohibited in accordance with the Wild and Scenic River Act. This would provide long-term protection to the outstandingly remarkable fish and wildlife habitat values from any mineral activities conflicts in the segment.

In the 3,500 acres in Recreational segments 1 and 3, new mining claims and existing operations would be allowed to continue, according to the Wild and Scenic Rivers Act.

However, patents would be restricted to the mineral estate, providing long-term protection of the outstandingly remarkable fish and wildlife habitat values by ensuring federal management of the surface estate after the terms of the lease have been fulfilled.

New dams, levees, and waterway diversions would be prohibited. This would provide long-term protection to the outstandingly remarkable fish and wildlife habitat values.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. Under the Safford District Resource Management Plan, efforts would focus on enhancing biodiversity by managing riparian/aquatic habitat as priority areas. All activities in the study area would be managed so as not to conflict with this goal. All management actions would, by design, avoid impacting nesting bald eagles.

Under the all suitable alternative, 2,240 acres of segment 2, which is in the Needle's Eye

Wilderness, would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone on 3,500 acres within the study area and surface occupancy for mineral leases would not be permitted in riparian areas on 3,500 acres.

These actions would protect the fish and wildlife habitat values in the study area by prohibiting or restricting surface disturbing activities.

In accordance with the Safford District Resource Management Plan, up to 1,505 acres of private land in segment 3 would be acquired on a willing seller-willing buyer basis. State land exchanges on a total of 700 acres would be pursued. Acquiring the state and private lands in the study area would benefit habitat values by providing federal protection.

Given the moderate to high mineral potential and current mining activity in the study area, consideration of the mining scenario is appropriate.

The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained. These mining operations could indirectly contribute to the degradation of outstandingly remarkable fish and wildlife habitat through spills, excavations, and tailings dumps. Mining activity outside of riparian zones could affect outstandingly remarkable fish and wildlife habitat values causing a loss of fish population or degradation of habitat through a decline in water quality.

The 1987-1991 assessment by the Arizona Department of Environmental Quality lists the Gila River below Coolidge Dam as being in "partial-support" of state surface water quality standards. The only noted water quality

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

concern was elevated levels of total dissolved solids and salts.

The Arizona Bureau of Water Quality Control and the Arizona Department of Environmental Quality have repeatedly tested the Gila River for violations of state water quality standards from mining-related activities.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would receive long-term legislative protection on 3,890 acres from the Wild and Scenic Rivers Act.

Implementation of the all suitable alternative could have minor indirect adverse impacts on the study area's outstandingly remarkable fish and wildlife habitat values from mining operations.

Impacts on Minerals Development

Segment 3 of the study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten. No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. There are 191 active mining claims, all in segment 3.

No geological structures favorable for the accumulation of oil and gas occur in the study area and no oil and gas leases or lease applications are existing. Though Mescal Warm Spring is near, no geothermal source is likely in the river study area.

Under the all suitable alternative, on 390 acres in segment 2 (Wild), new mining claims and mineral leasing would be prohibited in accordance with the Wild and Scenic River Act. This action could adversely affect potential

mining activity by withdrawing 390 acres in addition to that already withdrawn by wilderness.

In the 3,500 acres in segments 1 and 3 (recreational), new mining claims and existing operations would be allowed to continue, in accordance with the Wild and Scenic Rivers Act.

Patents, subject to valid existing rights, on 3,500 acres in recreational segments 1 and 3 would be restricted to the mineral estate.

The ongoing management activities described in Chapter II also would apply. For instance, under the all suitable alternative, 2,240 acres of segment 2, which is in the Needle's Eye Wilderness, would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone on 3,500 acres within the study area and surface occupancy for mineral leases would not be permitted in riparian areas on 3,500 acres.

• Conclusion

Minor adverse impacts on 390 acres in Wild segment 2 would occur on minerals development from implementing the all suitable alternative.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION/NOT SUITABLE ALTERNATIVE

The no action alternative determines that the entire Middle Gila River study area is nonsuitable and does not recommend it to Congress for inclusion in the National Wild and Scenic Rivers System. No wild and scenic river management actions would be implemented. None of the outstandingly remarkable values identified in the eligibility evaluation would

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

receive long-term legislative protection from the Wild and Scenic Rivers Act.

Impacts on the Outstandingly Remarkable Scenic and Geologic Values

The study area's remarkable scenic values are associated with its geology. Because of this the impacts on the two outstandingly remarkable values are discussed in a single section.

A report by the U.S. Geological Survey and Bureau of Mines on the upper portion of the area identified no mineral reserves or resources in the study area (Mineral Resources of the Needles Eye Wilderness Study Area, Gila County, Arizona, 1987). An area of moderate potential for metals in vein or replacement deposits is located in the river study area in Sections 35 and 36, T. 3 S., R. 16 E., and sections 1 and 2, T.4 S., R. 16 E. the remainder of the upper portion of the river study area has a low mineral resource potential for metals, non-metals and fuels. Although the remainder of the upper portion of the river study area is reported as having a low mineral resource potential, the Arizona Mining Association states that most of the river study area traverses an area of high mineral potential along the San Carlos Indian Reservation boundary.

The northern portion of segment 2 is in the Needle's Eye Wilderness and would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

The lower river study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten. No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. There are 191 active mining claims, all in segment 3.

No structures favorable for the accumulation of oil and gas occur in the study area and no oil and gas leases or lease applications are existing.

Under the no action alternative and in accordance with the Safford District Resource Management Plan, the portion of the study area in the Needle's Eye Wilderness would be managed as Visual Resource Management Class I. Scenic values would be protected by limiting management to those that preserve the characteristic landscape.

Under the no action alternative and in accordance to the Safford District Resource Management Plan, segment 3 would be managed as a Visual Resource Management Class II area. Scenic values would be protected by limiting management activities to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.

On 2,240 acres in segment 2, which is in the Needle's Eye Wilderness, would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

Under the no action alternative, new mining claims on a total of 3,890 acres in the study area would be allowed and existing operations would be allowed to continue subject to existing regulations (e.g., 43 CFR 3809) and any future regulations that the Secretary of the Interior may prescribe to protect values of rivers included in the National Wild and Scenic Rivers System.

In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone on 3,890 acres within the study area.

In accordance with the Safford District Resource Management Plan, surface occupancy for mineral leases would not be permitted in riparian areas on 3,890 acres.

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The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained. Mining activities involving new structures, ground disturbance and degradation of habitat through a decline in water quality could detract from the scenic quality of the study area. The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values.

In accordance with the Safford District Resource Management Plan, a total of 1,505 acres of private land in segment 3 would be acquired on a willing seller-willing buyer basis. State land exchanges on a total of 700 acres would be pursued. Acquiring the state and private lands in the study area would benefit scenic values by providing federal protection.

In accordance with the Safford District Resource Management Plan, instream flow monitoring and a comprehensive assessment would be conducted to determine the minimum flow required to support the outstandingly remarkable scenic, geologic, and fish and wildlife habitat values in the Middle Gila River and to meet the Arizona State Department of Water Resources requirements for a state-appropriated water right for the Middle Gila River.

• Conclusion

Implementation of the no action alternative could have minor adverse impacts on the study area's outstandingly remarkable scenic and geologic values from mining operations. The outstandingly remarkable scenic and geologic values would not receive special legislative protection on 3,890 acres.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The outstandingly remarkable fish and wildlife habitat in the Middle Gila River study area provides a home for a wide variety of fish, federally-listed threatened or endangered birds, mammals and reptiles.

Under the no action alternative and the Safford District Resource Management Plan, management efforts would focus on enhancing biodiversity by managing riparian/aquatic habitat as priority areas. All activities in the study area would be managed so as not to conflict with this goal. All management actions would, by design, avoid impacting nesting bald eagles.

On 2,240 acres in segment 2, which is bordered on the north by the Needle's Eye Wilderness would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

Under the no action/not suitable alternative, new mining claims on a total of 3,890 acres in the study area would be allowed and existing operations would be allowed to continue subject to existing regulations (e.g., 43 CFR 3809) and any future regulations that the Secretary of the Interior may prescribe to protect values of rivers included in the National Wild and Scenic Rivers System.

In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone on 3,890 acres within the study area.

In accordance with the Safford District Resource Management Plan, surface occupancy for mineral leases would not be permitted in riparian areas on 3,890 acres.

These management actions would help protect the fish and wildlife habitat values in the study area by prohibiting or restricting surface

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

disturbing activities.

In accordance with the Safford District Resource Management Plan, a total of 1,505 acres of private land 3 would be acquired on a willing seller-willing buyer basis. State land exchanges on a total of 700 acres would be pursued. Acquiring the state and private lands in the study area would benefit habitat values by providing federal protection.

In accordance with the Safford District Resource Management Plan, instream flow monitoring and a comprehensive assessment would be conducted to determine the minimum flow required to support the outstandingly remarkable scenic, geologic, and fish and wildlife habitat values in the Middle Gila River and to meet the Arizona State Department of Water Resources requirements for a state-appropriated water right for the Middle Gila River.

Given the moderate to high mineral potential and current mining activity in the study area, consideration of the mining scenario is appropriate.

The mining scenario projects two small mines and two moderate mines disturbing an estimated 18 acres and employing 30 people. Four roads covering a total of ten miles would be constructed and maintained. These mining operations could indirectly contribute to the degradation of outstandingly remarkable fish and wildlife habitat through spills, excavations, and tailings dumps. Mining activity outside of riparian zones could affect outstandingly remarkable fish and wildlife habitat values causing a loss of fish population or degradation of habitat through a decline in water quality.

The 1987-1991 assessment by the Arizona Department of Environmental Quality lists the Gila River below Coolidge Dam as being in "partial-support" of state surface water quality standards. The only noted water quality concern was elevated levels of total dissolved

solids and salts.

The Arizona Bureau of Water Quality Control and the Arizona Department of Environmental Quality have repeatedly tested the Gila River for violations of state water quality standards from mining-related activities.

• Conclusion

Implementation of the no action alternative could have minor adverse impacts on the study area's outstandingly remarkable fish and wildlife habitat values from mining operations. The outstandingly remarkable fish and wildlife habitat values would not receive special legislative protection on 3,890 acres.

Impacts on Minerals Development

Segment 3 of the study area passes through the Banner Mining District and by the Christmas Mine, a major copper producer. Other mines in the Banner District have produced gold, silver, lead, zinc, mercury and tungsten.

No mineral occurrences are known in the river study area but mineral potential could be considered moderate to high due to close association of the area with the mining district and past mineral production. There are 191 active mining claims, all in segment 3.

No geological structures favorable for the accumulation of oil and gas occur in the study area and no oil and gas leases or lease applications are existing. Though Mescal Warm Spring is near, no geothermal source is likely in the river study area.

On 2,240 acres in segment 2, which is bordered on the north by the Needle's Eye Wilderness would be subject to the provisions of the Wilderness Act, which withdrew the area from mineral entry.

Under the no action alternative, new mining

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

claims on a total of 3,890 acres in the study area would be allowed and existing operations would be allowed to continue subject to existing regulations (e.g., 43 CFR 3809) and any future regulations that the Secretary of the Interior may prescribe to protect values of rivers included in the National Wild and Scenic Rivers System.

In accordance with the Safford District Resource Management Plan, mineral materials would not be sold in the riparian zone on 3,890 acres within the study area.

In accordance with the Safford District Resource Management Plan, surface occupancy for mineral leases would not be permitted in riparian areas on 3,890 acres.

- Conclusion

There would be no adverse impacts on mining activity from implementing the no action alternative.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Middle Gila River study area environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that the Middle Gila River study area was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Gila Resource Area Office, Safford, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Middle Gila River study area were held in Winkelman April 12, 1993, Tucson April 13, 1993, and Phoenix April 14, 1993. Ten to 12 people attended the Winkelman meeting, 35 to 40 were at the Tucson meeting and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the Internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals.

In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shivwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermillion Resource Area.

B. Smith, Renewable Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson acted as project manager.

MIDDLE GILA RIVER WILD AND SCENIC RIVER STUDY AREA

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Arizona Game and Fish Department

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**PARIA RIVER
WILD AND SCENIC RIVER STUDY AREA**

**VERMILION RESOURCE AREA
ARIZONA STRIP DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

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PARIA WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Paria River were identified in the Arizona Strip District Resource Management Plan (1991) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Paria River to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Paria River Wild and Scenic River Study Area is 10 to 24 miles west of Page, Arizona in Coconino County. The Paria River study area contains 28 river miles from the Arizona-Utah State line to the boundary of Glen Canyon National Recreation Area near Lee's Ferry, and a strip of land 0.25 mile wide from the annual mean high water mark on each side of the river.

The Bureau of Land Management portion of the Paria River in Arizona is managed by the Vermillion Resource Area of the Arizona Strip District.

The study area ranges in elevation from 3,600 to 4,200 feet. The area is within the Great Basin desert scrub biotic community in the Colorado Plateau Physiographic Province. The Paria River drains the plateau country south of Bryce Canyon National Park and feeds into the Colorado River.

The Paria River is 92 miles long from its source at Bryce Canyon, Utah, to its mouth at Lee's Ferry. This environmental impact statement covers the 28-mile long river segment on the Bureau of Land Management-administered public lands in Arizona. This segment of the Paria River was determined to be eligible and suitable for inclusion in the Wild and Scenic Rivers System as Wild by the Bureau of Land Management in the Arizona Strip District Resource Management Plan. The river is free-flowing and has outstandingly remarkable scenic, recreational, geologic, riparian/fish and wildlife, and cultural values.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE PR-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY.**

PARIA RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	28	0	0	28
PERCENT	100	0	0	100
TOTAL ACRES	8,960	0	0	8,960
PERCENT	100	0	0	100
SUBSURFACE MINERALS ACRES	8,960	0	0	8,960

C. INTERRELATIONSHIPS

Bureau of Land Management

The Paria River flows from public and private lands in Utah. The Paria River in Utah will be determined to be eligible, ineligible suitable, or not suitable in the Kanab-Escalante Resource Management Plan.

The Paria River study area is entirely within the Paria-Vermillion Cliffs Wilderness Area. The wilderness, designated in 1984, extends north four miles into Utah along the Paria River and west nine miles along Buckskin Gulch, a tributary of the Paria. The wilderness is

managed according to the Paria Canyon-Vermillion Cliff Wilderness Management Plan.

This river study area is within the 227,000 acre Canyons/Plateaus of the Paria Resource Conservation Area. This resource conservation area has cultural, recreation, scenic, wilderness, and wildlife values that are protected by management prescriptions designed to minimize impacts from human activities.

Wildlife populations and habitats in the Paria River study area are managed in accordance with the Paria-Kanab Creek Habitat Management Plan, a cooperative Bureau of Land Management-Arizona Game and Fish Department document.

**TABLE PR-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE PARIA RIVER WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

PARIA RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Paria Canyon-Vermillion Cliffs Wilderness Area	8,960	100

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

National Park Service

The Paria River flows from public lands managed by the Bureau of Land Management onto the Glen Canyon National Recreation Area, which is managed by the National Park Service. The portion of the river administered by the National Park Service is approximately three miles in length.

U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service has responsibilities under the Endangered Species Act to recover threatened or endangered wildlife species and their native habitats.

State of Arizona

The Arizona Department of Water Resources is responsible for maintaining records of water rights. The Arizona Game and Fish Department is responsible for managing wildlife populations throughout the State.

The entire study area is public land administered by the Bureau of Land Management and managed as wilderness. No state lands are within the study area.

Local Government Agencies

The entire study area is within Coconino County, Arizona. The Paria flows through Kane County in adjacent Utah.

Private

The entire study area is public land administered by the Bureau of Land Management and managed as wilderness. No private lands are within the study area.

D. SCOPING

Scoping meetings specifically highlighting the Paria study area were held in 1993 in Phoenix April 14 and St. George, Utah April 16. Fifty-five

to 60 people attended the Phoenix meeting and 20 to 25 attended the St. George meeting.

Issues relating to the Paria River study area were raised by the Bureau of Land Management and the public during the development of the Arizona Strip District Resource Management Plan and through the Arizona Wild and Scenic River environmental impact statement planning, scoping, and public review process.

Scoping Issues

- Buckskin Gulch should be designated as a wild and scenic river
- Impacts on federally-listed fish and wildlife species
- Impacts on livestock grazing
- Impacts on water quality and instream flows
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable recreation values
- Impacts on outstandingly remarkable riparian/fish and wildlife values
- Impacts on outstandingly remarkable cultural resource values
- Impacts on outstandingly remarkable geologic values
- Impacts on air quality

Issues Considered but Not Addressed

- Buckskin Gulch should be designated as a wild and scenic river.

Although Buckskin Gulch is part of the Paria Canyon-Vermillion Cliffs Wilderness Area, the gulch is located in Utah and the Arizona Bureau of Land Management does not have the administrative authority to study its eligibility status or recommend its suitability.

This issue will not be discussed further.

- Impact on federally-listed fish and wildlife species.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species.

This issue will not be discussed further.

- Impact on air quality.

The implementation of the management actions in the alternatives will not have impacts on air quality in the Paria River study area because there are no actions that will cause surface disturbance or development that would release particulate matter.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

The areas of major concern for the Paria River study area may be grouped into two categories. One of these supports recommendations to Congress for inclusion of the subject river segments as identified in the eligibility assessment into the National Wild and Scenic River System. Another includes a preference to retain present conditions.

These categories of issues are treated as alternatives in this document.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF ALTERNATIVES

A. INTRODUCTION

This section describes the resource management planned or projected to occur in the Paria River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative (all suitable)

No action (not suitable)

B. RECOMMENDED ALTERNATIVE

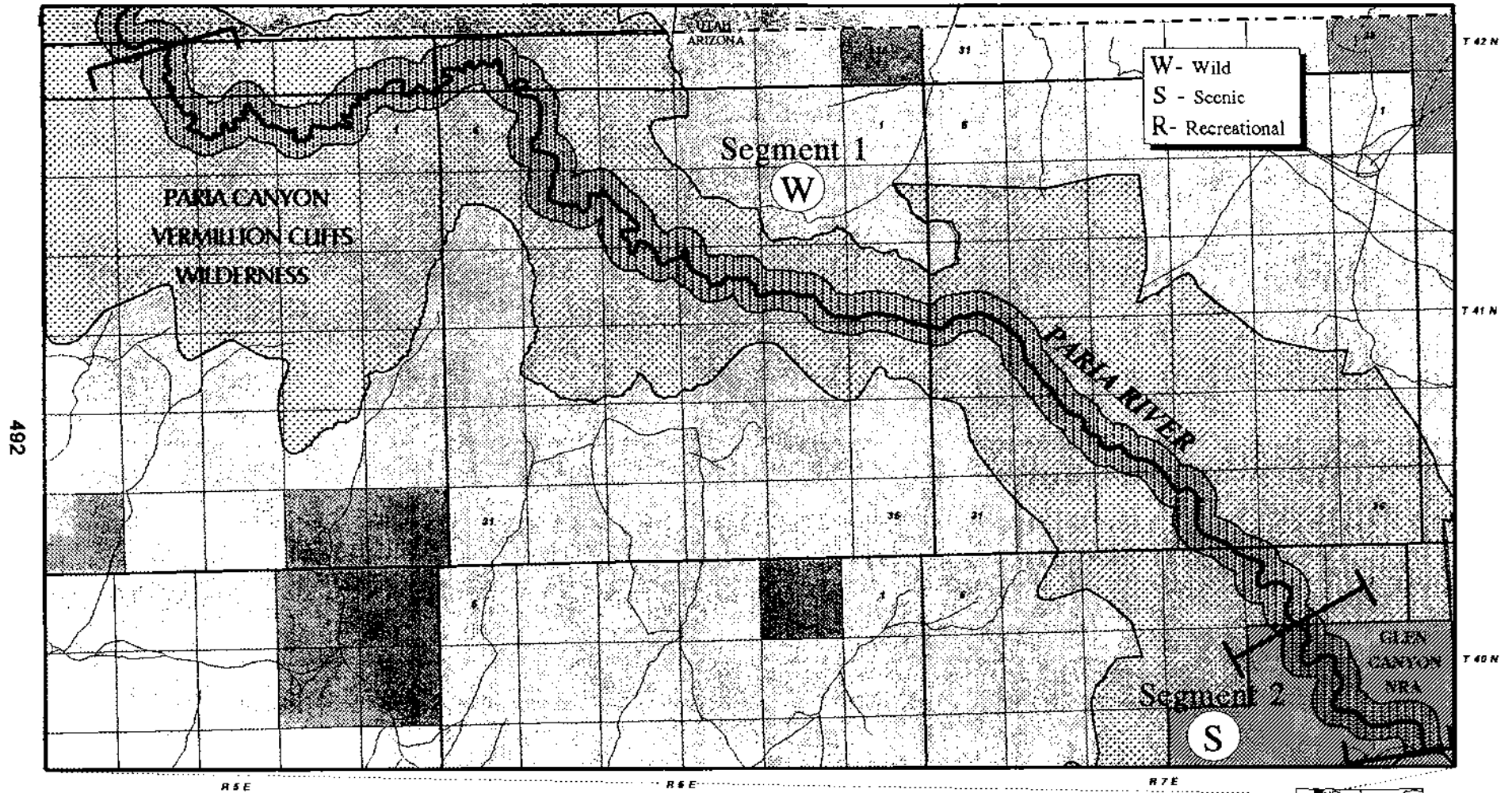
The recommended alternative determines the entire 28-mile Paria River study area as suitable and recommends it for designation as Wild.

Wild and Scenic River Management Actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the actions below would occur in connection with the designation of the Paria River study area as wild. Where wild and scenic river management actions overlap ongoing management actions, the more stringent action will be implemented.

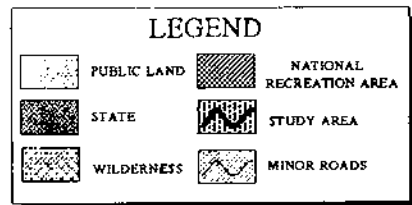
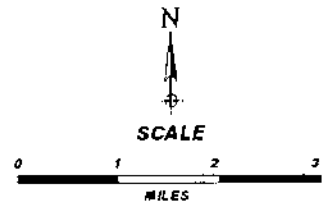
- New mining claims and mineral leases would be prohibited. There are no existing claims or operations in the study area.
- Water quality would be maintained or improved.
- Hydroelectric power facilities would be prohibited.
- No new flood control dams, levees, or other works would be permitted.
- All water supply dams and major diversions would be prohibited.
- Construction of new roads or trails for motorized travel would be prohibited.
- Normally, motorized use would be restricted in a wild river area. Exceptions are for search and rescue and other emergency situations.
- Campgrounds, interpretive centers, or administrative headquarters within the river corridor would be prohibited. Simple comfort and convenience facilities could be permitted.
- Woodcutting would not be permitted except when needed to clear trails, for visitor safety, or to control fire.
- Livestock grazing would be managed to protect outstandingly remarkable values within the study area.
- New transmission lines, natural gas lines, and water lines would be prohibited.
- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow water rights for applicable outstandingly remarkable values.

PARIA RIVER (Recommended Alternative)



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Ongoing Management Actions

The entire Paria River study area is in the Paria Canyon-Vermillion Cliffs Wilderness. The ongoing management actions listed below summarize selected management actions from the Paria Canyon-Vermillion Cliffs Wilderness Management Plan and the Arizona Strip District Resource Management Plan.

- Mineral entry is prohibited in the wilderness area. There are no valid claims or operations within the study area.
- Motorized vehicle use is prohibited in the wilderness area.
- Only primitive recreation activities can occur in the wilderness area.
- No trail construction would be allowed unless necessary to correct resource damage.
- Fish and wildlife habitat are managed in accordance with the wilderness area status.
- Roads and road construction are prohibited in the wilderness area.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, would be developed for selected cultural resources that have either a

high level of significance or a history of vandalism.

- Water quality would be monitored periodically and action taken if necessary.
- Abandoned or unnecessary livestock grazing improvements would be removed in cooperation with the permittee.
- Livestock grazing on the Lee's Ferry Allotment would be managed in accordance with the Soap Creek Allotment Management Plan and the guidelines listed in the Paria Canyon-Vermillion Cliffs Wilderness Management Plan. Livestock grazing would not exceed actual use levels at time of wilderness designation.
- A management plan would be developed for the canyons and plateaus of the Paria Resource Conservation Area.

C. NO ACTION ALTERNATIVE (NOT SUITABLE)

The no action alternative determines the Paria River study area is not suitable and does not recommend it for designation as a wild and scenic river. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings. The study area, which is entirely within the Paria Canyon-Vermillion Cliffs Wilderness, would continue to be managed for wilderness values.

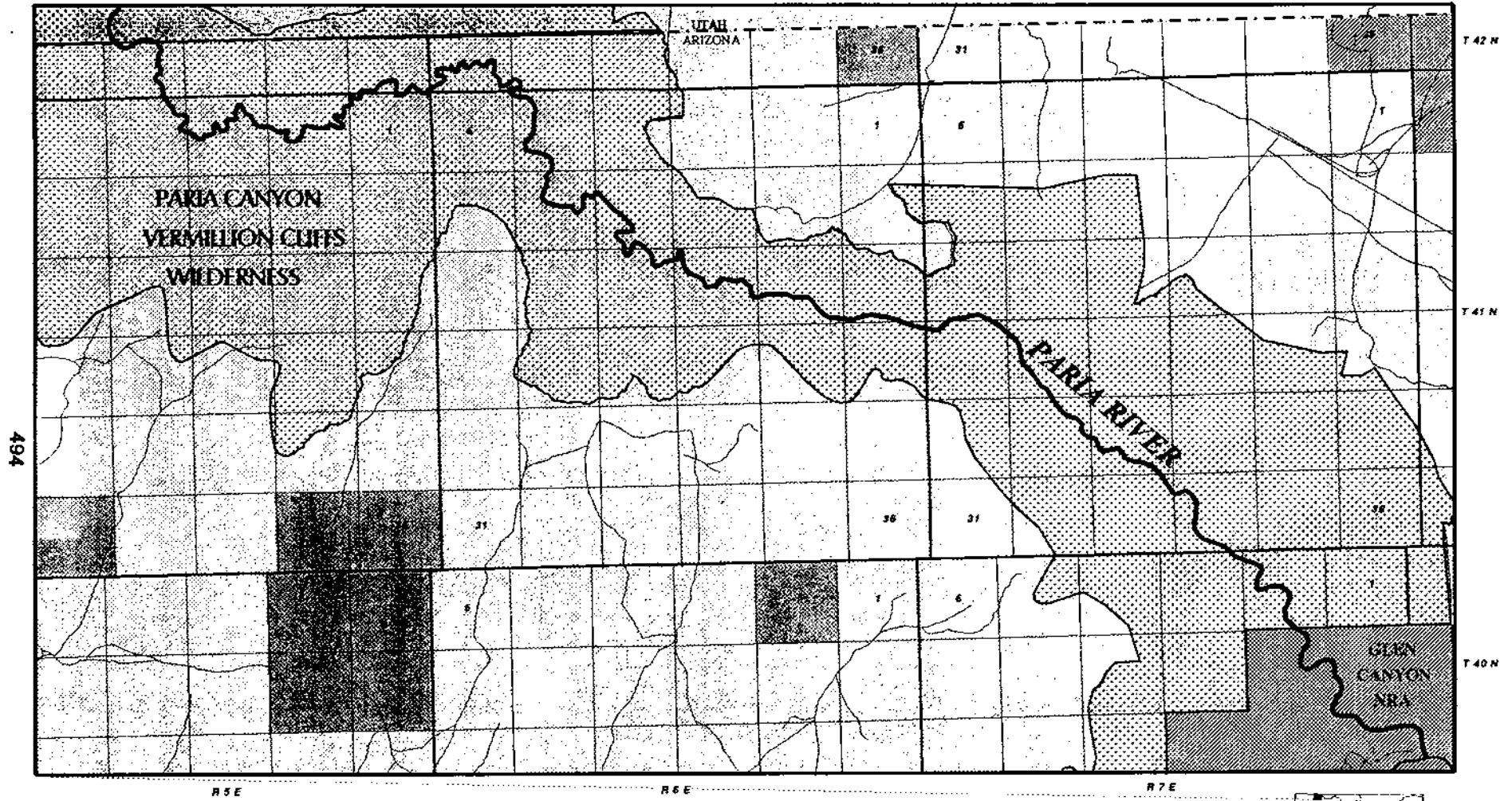
The following summarizes management actions for selected resources.

Wild and Scenic River Management Actions

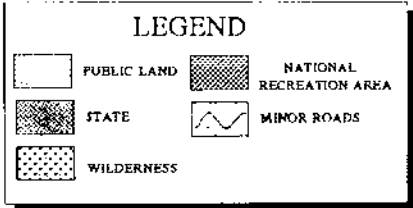
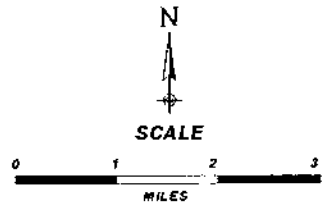
There would be no management actions associated with wild and scenic river designation.

PARIA RIVER

(No Action Alternative)



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Ongoing Management Actions

The entire Paria River study area is in the Paria Canyon-Vermillion Cliffs Wilderness. The ongoing management actions listed below summarize selected management actions from the Paria Canyon-Vermillion Cliffs Wilderness Management Plan and the Arizona Strip District Resource Management Plan.

- Mineral entry is prohibited in the wilderness area. There are no valid existing claims or mineral operations within the study area.
- Motorized vehicle use is prohibited in the wilderness area.
- Only primitive recreation activities can occur in the wilderness area.
- No trail construction would be allowed unless necessary to correct resource damage.
- Fish and wildlife habitat are managed in accordance with the wilderness area status.
- Roads and road construction are prohibited in the wilderness area.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area would be completed.

- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- Water quality would be monitored periodically and action taken if necessary.
- Abandoned or unnecessary livestock grazing improvements would be removed in cooperation with the permittee.
- Livestock grazing on the Lee's Ferry Allotment will be managed in accordance with the Soap Creek Allotment Management Plan and the guidelines listed in the Paria Canyon-Vermillion Cliffs Wilderness Management Plan. Livestock grazing will not exceed actual use levels at time of wilderness designation.
- A management plan would be developed for the canyons and plateaus of the Paria resource Conservation Area.

D. ALTERNATIVES CONSIDERED BUT REJECTED

There are no alternatives that were considered and rejected.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE PR-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative/all suitable	No action/not suitable
Outstandingly Remarkable Scenic Values	No adverse impact on scenic values. Potential beneficial impact from prohibition on dams and impoundments	No impact on scenic values; No long-term protection from Wild and Scenic Rivers designation
Outstandingly Remarkable Recreational Values	No adverse impact on scenic values. Potential beneficial impact from prohibition on dams and impoundments	No adverse impact; No long-term protection from Wild and Scenic Rivers designation
Outstandingly Remarkable Riparian/fish and wildlife Values	Positive impact on fish habitat through the protection and enhancement of instream flows and water quality. Potential beneficial impact on riparian	No direct impact; Indirect adverse impact to fish habitat if flows are reduced or water quality is degraded by activities occurring upstream; No long-term protection from Wild and Scenic Rivers designation
Outstandingly Remarkable Cultural Resource Values	No adverse impact on cultural values. Long-term protection under Wild and Scenic Rivers Act	No adverse impact; No long-term protection from Wild and Scenic Rivers designation
Outstandingly Remarkable Geologic Values	No adverse impact on geologic values. Long-term protection under Wild & Scenic Rivers Act	No adverse impact; No long-term protection from Wild and Scenic Rivers designation
Livestock Grazing	Potential adverse impact if livestock grazing is found to be adversely impacting outstandingly remarkable scenic, recreation, cultural, or riparian/fish and wildlife habitat values	No adverse impact
Water Quality and Instream Flow	No adverse impact; Potential beneficial impact through protection of instream flow and water quality	Potential for adverse impacts to water quality and instream flow from activities occurring upstream

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

The following sections discuss resource values that could be affected by the implementation of the alternatives for recommending the Paria River for inclusion in the National Wild and Scenic Rivers System.

For further information refer to the Arizona Strip District Resource Management Plan and Environmental Impact Statement, the Paria Canyon-Vermillion Cliffs Wilderness Management Plan, the Paria-Kanab Creek Habitat Management Plan, and the Vermillion Grazing Environmental Impact Statement.

A. OUTSTANDINGLY REMARKABLE VALUES

The Paria River was determined to be eligible for inclusion in the Wild and Scenic Rivers System because it meets the definition of a free-flowing stream from the Utah-Arizona State line to Glen Canyon National Recreation Area.

Based on the suitability determination in the Arizona Strip Resource Management Plan, the entire Arizona portion of the Paria River, including three miles on National Park Service (Glen Canyon) lands, as well as four miles of the Utah portion immediately north of the state line is suitable for inclusion into the Wild and Scenic Rivers System. However, this environmental impact statement covers only the 28-mile portion of the Paria River on Bureau of Land Management administered lands in Arizona.

The Arizona Strip Resource Management Plan concluded that the river has several outstandingly remarkable values: scenic, recreational, riparian vegetation, fish and wildlife habitat, cultural resources, and geologic. The outstandingly remarkable fish habitat value only exists on the National Park Service portion of the river near the confluence of the Paria River with the Colorado River. Riparian vegetation is an outstandingly remarkable value for the Arizona Bureau of Land Management portion,

and riparian vegetation is habitat for a wide variety of fish and wildlife species. These habitat values are inextricably related to the fish and wildlife species that use this habitat. Therefore, this document will refer to a riparian/fish and wildlife value to remain consistent with other rivers under analysis in this document.

The Paria River was classified as Wild, being free of impoundments, generally inaccessible except by trail, with essentially primitive shorelines, and with unpolluted waters.

The outstandingly remarkable scenic and geologic values are associated with the river's rugged and often narrow canyon. Walls are up to 600 feet high, then gradually open to 2.5 miles wide and 2,600 feet deep. The river cuts through an area of significant geologic uplift and associated faulting, exposing numerous layers of the earth's crust and providing spectacular scenery.

The Paria River study area has outstandingly remarkable recreational values. Access is possible only by foot or horseback from four trailheads outside the wilderness: three in Utah and one in Arizona at Lee's Ferry. Recreational use of the river typically includes hiking, backpacking, and some horseback riding. River rafting and floating are generally not done due to low water and hazards.

Outstandingly remarkable riparian/fish and wildlife values exist in the area. The shoreline consists primarily of narrow strips of sandy, wooded terraces, although in the upper canyon the shorelines are sheer canyon walls. Riparian vegetation such as salt cedar (*Tamarix sp.*), willow (*Salix sp.*), box elder (*Acer negundo*), and cottonwood (*Populus Fremontii*) grows along the shoreline and, except for salt cedar, is important wildlife habitat.

Although shoreline development is non-existent,

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

evidence of human occupation and use occurs along the river. The area contains the remains of a ranch site, several deteriorating roads constructed for uranium exploration in the 1950s, a small corral, an abandoned water pump, old fences, rock shelters, and rock art on boulders and along the steep canyon walls.

B. MINERALS

The entire river study area is within a federally designated wilderness area that has been withdrawn from locatable mineral entry and mineral material disposal and closed to oil and gas leasing and development. There are no existing claims or operations within the study area.

C. LANDS

The entire river study area is in a wilderness area with no state or private inholdings.

D. RECREATION

Recreational use of the river typically includes hiking, backpacking, and some horseback riding. River rafting or floating is generally not done due to low water and hazards. Little recreation use of the area occurs during the winter months. The river is not used for sport fishing.

The Paria Canyon-Vermillion Cliffs Wilderness Management Plan (1983) contains detailed recreation information.

Data from the Recreation Management Information System indicates that there were 5,000 recreation visits to the wilderness area in 1993 totalling 244,800 visitor hours. There were three Special Recreation Permits issued in 1993 that resulted in 158 visits totalling 10,500 visitor hours (Arizona Highways photography class, Sierra Club hikes, and Elderhostel tours).

The Paria River provides opportunities for a primitive experience and solitude. The area is

natural and undisturbed, while management consists of low levels of rules, regulations, signing, and ranger presence.

Visitors have complained (through a visitor register, letters, and personal contact) about the presence of livestock, livestock droppings, flies, odors, and overgrazed vegetation in the lower 6.5 miles of the canyon. There is a contrast between the upper canyon, which is not grazed by cattle, and the lower canyon, where cattle graze during the winter two years out of three. Hikers commonly go north to south, and as they pass through the canyon they notice this difference.

E. FISH AND WILDLIFE

Wildlife, particularly bighorn sheep (Ovis canadensis) and mule deer (Odocoileus hemionus), contribute to outstanding values of the area.

According to information provided by the U.S. Fish and Wildlife Service, Paria Canyon provides habitat for the peregrine falcon (Falco peregrinus anatum), bald eagle (Haliaeetus leucocephalus), humpback chub (Gila cypha), and razorback sucker (Xyrauchen texanus), each federally listed as endangered, and the southwestern willow flycatchers (Empidonax traillii extimus), proposed for listing as endangered. The Paria River/Colorado River confluence is proposed as critical habitat for the razorback sucker.

The Paria River is home to small populations of speckled dace (Rhinichthys osculus), bluehead mountain sucker (Pantosteus delphinus), and the flannelmouth sucker (Catostomus latipinnis - a candidate category 2 species), all of which are native fish species. These species are either restricted to or are most common on National Park Service administered portions of the Paria River near its confluence with the Colorado River.

Other candidate category 2 species that may be

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

In the study area are the Marble Canyon kangaroo rat (Dipodomys microps leucotis), ferruginous hawk (Buteo regalis), loggerhead shrike (Lanius ludovicianus), and chuckwalla (Sauromalus obesus obesus).

The lower end of the canyon has occasional beaver (Castor canadensis). Many other species of reptiles, birds, and mammals live all or part of the year in the study area. For further information refer to the Paria-Kanab Creek Habitat Management Plan.

F. VEGETATION

The shoreline consists primarily of narrow strips of sandy, wooded terraces, although in the upper canyon the shorelines are sheer canyon walls. Riparian vegetation such as willow, box elder, and cottonwood grows along the shoreline. Exotic species such as Russian olive and salt cedar have become established.

Upland vegetation is typical of the Great Basin Desert, consisting primarily of sand sage (Artemisia filifolia) and other shrubs, grasses, and forbs.

Cattle and people have trampled the streambank in some locations, but the overall streambank condition is good. Historic livestock grazing may have had an adverse impact on riparian vegetation, but changes in management have improved conditions. Representatives of different species and age classes are present.

G. CULTURAL RESOURCES

Although shoreline development is non-existent, evidence of human occupation and use occurs along the river. The area contains the remains of a ranch site, several deteriorating roads constructed for uranium exploration in the 1950s, a small corral, an abandoned water pump, old fences, rock shelters, and rock art on boulders and along the steep canyon walls.

H. WATER RESOURCES

The Paria River is considered a perennial stream, even though portions can be dry during the hottest summer months. High flows typically occur during a late winter/spring runoff period and as a result of floods from summer thunderstorms occurring upstream along the drainage system. Frequent scouring of the river canyon as a result of high flows constantly affects channel morphology and the condition of riparian vegetation.

The Paria River generally contains poor water quality as a result of high turbidity and salinity. The water appears muddy for most of the year. Dissolved salt and sediment loads are high, reducing the feasibility and success of impoundments on the river. Impoundments have been considered for the purpose of reducing salt and silt entering the Colorado River at Lee's Ferry. There is generally light to moderate algal growth in pools during periods of low water.

Springs rising in the canyon at the Arizona-Utah state line (and also about ¼ mile up Buckskin Gulch above its confluence with the Paria River) generally provide year round flow even when the upstream portion in Utah is dry due to diversion or drought. Other springs along the canyon below the confluence add to this flow.

The Paria River has been determined by the State of Arizona to be non-navigable, which means that the riverbed is owned by the federal government and managed by the Bureau of Land Management.

Bureau of Land Management has not filed an application for an instream flow water right with the State of Arizona. Any water rights within the river are associated with livestock grazing. There are no known water wells or diversions in the study area.

Upstream in Utah, water rights have been obtained for agricultural and domestic uses.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

Agricultural, commercial, and residential development in Utah could reduce water quality and stream flows in the future.

Downstream from the study area on the Colorado River, water is used for recreational purposes through the Grand Canyon (some water is pumped out of the Grand Canyon to the South Rim for domestic uses) and for electric generation at Hoover Dam.

Competition for water in the area is increasing. Communities in southern Utah are actively exploring ways of obtaining water to support growing populations. There is concern from local water conservancy districts and potential users upstream about the possible effects that designation of the Paria River as a wild and scenic river would have on future projects in Utah.

I. LIVESTOCK GRAZING

Cattle grazing occurs in the study area on the Lee's Ferry Allotment, which is managed in accordance with the Soap Creek Allotment Management Plan. Grazing occurs two years out of three, from November 1 to January 31, in one pasture, and from February 1 to April 15 in a second pasture. The third year the canyon is rested from grazing. The river is the base water source for this operation.

Livestock grazing occurs on only the lower 6.5 miles of the canyon or on about 24 percent of the study area.

There are remnants of a corral and buildings associated with the abandoned Wilson Ranch in the lower canyon.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Paria Wild and Scenic River Study Area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally-designated wild and scenic river.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative for the Paria Wild and Scenic River Study Area would determine the entire study area as suitable and recommend it for designation as a wild and scenic river.

Scenic, recreation, riparian/fish and wildlife habitat, cultural resource, and geologic values have been identified as outstandingly remarkable in the Paria Wild and Scenic River Study Area. Under the recommended alternative the outstandingly remarkable values in the study area would receive the special long-term legislative protection of the Wild and Scenic Rivers Act in addition to the protection of the Wilderness Act.

Impacts on Outstandingly Remarkable Scenic Values

The segment runs through a rugged and often narrow canyon with walls up to 600 feet high that gradually open to 2.5 miles wide and 2,600

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feet deep. The river cuts through an area of significant geologic uplift and associated faulting, exposing numerous layers of the earth's crust and providing spectacular scenery.

Wild river management actions under the recommended alternative would require that scenic quality be maintained or improved. Dams and impoundments would be prohibited. The Bureau of Land Management would develop and implement appropriate management plans which would include actions to protect the outstandingly remarkable scenic values.

- Conclusion

Under the recommended alternative, the outstandingly remarkable scenic values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Recreation Values

The Paria Wild and Scenic River Study Area has outstandingly remarkable recreational values. Access is possible only by foot or horseback from four trailheads outside the wilderness: three in Utah and one in Arizona at Lee's Ferry.

Recreation uses that are common in the area such as hiking, camping, and horseback riding would continue to be managed according to provisions in the wilderness management plan.

The Bureau of Land Management would be required to maintain or improve water quality in the study area. Accordingly, the Bureau of Land Management would develop and implement actions within appropriate management plans. These actions would preserve the outstandingly remarkable recreation values.

- Conclusion

The outstandingly remarkable recreation values

would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Riparian/Fish and Wildlife Habitat Values

Outstandingly remarkable riparian/fish and wildlife habitat values exist in the area. The shoreline consists primarily of narrow strips of sandy, wooded terraces, although in the upper canyon the shorelines are sheer canyon walls. Riparian vegetation such as salt cedar, willow, box elder, and cottonwood grows along the shoreline and is important wildlife habitat.

Livestock grazing occurs in the lower canyon during the winter two years out of three and may have an adverse impact on riparian vegetation, and therefore indirectly impact the fish and wildlife species that rely on the riparian vegetation for foraging, nesting, and cover habitat.

The Bureau of Land Management would be required to maintain or improve water quality in the study area. Any improvement in water quality would positively impact riparian/fish and wildlife habitat values.

Wild river management actions under the recommended alternative would require that riparian/fish and wildlife habitat quality be maintained or improved. Accordingly, the Bureau of Land Management would develop and implement actions in appropriate management plans. These would protect the outstandingly remarkable riparian/fish and wildlife habitat values.

- Conclusion

The outstandingly remarkable riparian/fish and wildlife habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Cultural Resource Values

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

Although shoreline development is non-existent, evidence of human occupation and use occurs along the river. The area contains the remains of a ranch site, several deteriorating roads constructed for uranium exploration in the 1950s, a small corral, an abandoned water pump, old fences, rock shelters, and rock art on boulders and along the steep canyon walls.

Under the recommended alternative, cultural resources would continue to be protected by wilderness designation and monitoring by cultural specialists and law enforcement personnel.

Other activities would be managed to protect the outstandingly remarkable cultural resource values.

- **Conclusion**

The outstandingly remarkable cultural resource values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Geologic Values

Outstandingly remarkable geologic values are contained within the wilderness area. Mineral entry and leasing is prohibited. Road construction is prohibited. Dams and impoundments that could have an adverse impact on the natural landscape would be prohibited.

- **Conclusion**

The outstandingly remarkable geologic values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Livestock Grazing

Cattle grazing occurs in the study area on the Lee's Ferry Allotment, which is managed in accordance with the Soap Creek Allotment

Management Plan. Grazing occurs two years out of three within the canyon. The river is the base water source for this operation. Livestock grazing actually occurs on only the lower 6.5 miles of the canyon or on about 24 percent of the study area.

- **Conclusion**

Selection and implementation of the recommended alternative could adversely impact grazing if grazing reduction, exclusion, or alteration is necessary to protect outstandingly remarkable values. Improvements in water quality and riparian condition and protection of instream flows would benefit livestock grazing.

Impacts on Water Quality and Instream Flow

Under the recommended alternative, the Bureau of Land Management would protect instream flow through the acquisition of water rights from the State of Arizona. The Bureau would protect or enhance water quality wherever possible. Construction of dams and impoundments would be prohibited within the study area. A potential exists for impoundments, dams and diversions upstream in Utah.

- **Conclusion**

There would be no adverse impacts on water quality from the selection of the recommended alternative. There could be positive impacts on water quality.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant

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actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Paria Wild and Scenic River Study Area. Over most of the area the type of actions that could affect or would be affected by implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Paria-Vermillion Cliffs wilderness management.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints applying to management of these areas.

Irreversible and irretrievable commitments of resources

Under the recommended alternative, mineral entry would not be allowed, and resource management activities would be subject to existing management regulations and constraints associated with the Paria-Vermillion Cliffs wilderness management.

Wilderness area designation is a legislative action and subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

There would be no unavoidable adverse effects from implementation of the recommended alternative.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other

management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

Under the no action alternative the Paria River study area would not be determined to be suitable and would not be recommended for designation as a wild and scenic river. Its outstandingly remarkable values would not receive special long-term legislative protection under the Wild and Scenic Rivers Act.

Scenic, recreation, riparian/fish and wildlife habitat, cultural resources, and geologic values have been identified as outstandingly remarkable in the Paria Wild and Scenic River Study Area.

Impacts on Outstandingly Remarkable Scenic Values

The segment runs through a rugged and often narrow canyon with walls up to 600 feet high that gradually opens to 2.5 miles wide and 2,600 feet deep. The river cuts through an area of significant geologic uplift and associated faulting, exposing numerous layers of the earth's crust and providing spectacular scenery.

• Conclusion

The outstandingly remarkable scenic values would not receive long-term protection from the Wild and Scenic Rivers Act. However, the scenic values are contained within the wilderness area and are protected through wilderness management prescriptions. There would be no direct impact from selection of the no action alternative.

Impacts on Outstandingly Remarkable Recreation Values

The study area has outstandingly remarkable recreational values. Access is possible only by foot or horseback from four trailheads outside the wilderness: three in Utah and one in Arizona

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

at Lee's Ferry.

Recreation uses that are common in the area such as hiking, camping, and horseback riding would continue to be managed according to provisions in the wilderness management plan.

• Conclusion

The outstandingly remarkable recreation values would not receive long-term protection from the Wild and Scenic Rivers Act. However, the recreational values are protected through wilderness management prescriptions. Implementing the no action alternative would not affect recreational uses.

Impacts on Outstandingly Remarkable Riparian/Fish and Wildlife Habitat Values

Outstandingly remarkable riparian/fish and wildlife habitat values exist in the area. The shoreline consists primarily of narrow strips of sandy, wooded terraces, although in the upper canyon the shorelines are sheer canyon walls. Riparian vegetation such as salt cedar, willow, box elder, and cottonwood grows along the shoreline and is important wildlife habitat.

Livestock grazing occurs in the spring and may have an adverse impact on riparian vegetation, therefore indirectly impacting the fish and wildlife species that rely on riparian vegetation for foraging, nesting, and cover.

The Bureau of Land Management would continue to protect instream flows and water quality under this alternative, which would have an indirect positive impact on fish habitat values.

• Conclusion

The outstandingly remarkable riparian/fish and wildlife values would not receive long-term protection from the Wild and Scenic Rivers Act. Indirect adverse impact to fish habitat if flows are reduced or water quality is degraded by

activities occurring upstream; No long-term protection from Wild and Scenic Rivers designation.

Impacts on Outstandingly Remarkable Cultural Resource Values

Although shoreline development is non-existent, evidence of human occupation and use occurs along the river. The area contains the remains of a ranch site, several deteriorating roads constructed for uranium exploration in the 1950s, a small corral, an abandoned water pump, old fences, rock shelters, and rock art on boulders and along the steep canyon walls.

Under the no action alternative, cultural resources would continue to be protected by wilderness designation and monitoring by cultural specialists and law enforcement personnel.

• Conclusion

The outstandingly remarkable cultural resource values would not receive long-term protection from the Wild and Scenic Rivers Act. However, the cultural resource values are protected through wilderness management prescriptions. There would be no direct adverse impacts on cultural resources from implementation of the no action alternative.

Impacts on Outstandingly Remarkable Geologic Values

The geologic values are contained within the wilderness area. Mineral entry is prohibited. Road construction is prohibited.

• Conclusion

The outstandingly remarkable geologic values would not receive long-term protection from the Wild and Scenic Rivers Act. However, the geologic values are protected through wilderness management prescriptions. There would be no direct adverse impact from the

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

selection of the no action alternative.

Impacts on Livestock Grazing

In accordance with the wilderness status, livestock grazing currently occurs in the study area on the Lee's Ferry Allotment and is managed in accordance with the Soap Creek Allotment Management Plan.

- Conclusion

Selection and implementation of the no action alternative would not adversely impact grazing.

Impacts of Water Quality and Instream Flow

Under the no action alternative, the Bureau of Land Management would protect or enhance water quality. A potential exists for impoundments, dams and diversions upstream in Utah that could indirectly impact water quality and instream flow.

- Conclusion

With the selection and implementation of the no action alternative **there is a potential for indirect adverse impacts to water quality and instream flow from activities occurring upstream.**

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Paria River Wild and Scenic River suitability environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January 1993.

B. ELIGIBILITY

A determination was made in the Arizona Strip District Resource Management Plan (1991) that the Paria River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Arizona Strip District Resource Management Plan is on file at the Vermillion Resource Area Office, St. George, Utah, and the Arizona Strip District Office, St. George, Utah.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Paria River Wild and Scenic Study Area were held in Phoenix April 14 and St. George, Utah April 16. Fifty-five to 60 people attended the Phoenix meeting and 20 to 25 attended the St. George meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the core group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shivwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the review group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermilion Resource Area.

B. Smith, Renewable Resources Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson acted as project manager.

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

REFERENCES

Arizona Department of Commerce

- 1991 Nonmetropolitan Counties Labor Force and Employment: December 1990, Arizona Labor Market Information Newsletter, 15 (2), 10 February 1991.

Arizona Rivers Coalition

- 1991 Arizona Rivers. Lifeblood of the Desert: A Citizens Proposal for the Protection of Rivers in Arizona, Phoenix, Arizona.

Office of the Federal Register

- ND Code of Federal Regulations, 40 and 43, Washington, D.C.

Public Laws

- 1976 P.L. 94-579, Federal Land Policy and Management Act of 1976.
1969 P.L. 91-190, National Environmental Policy Act of 1969.
1968 P.L. 90-542, Wild and Scenic Rivers Act of 1968.

U.S. Bureau of Land Management

- 1992 Potential Wild and Scenic Rivers, Phoenix, Arizona.
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ND Soap Creek Allotment Management Plan, St. George, Utah, Arizona Strip District

PARIA RIVER WILD AND SCENIC RIVER STUDY AREA

U.S. Bureau of the Census

1990 Population Projections for Arizona's Places July 1, 1989-2040, Arizona Revised Population Estimates: 1981-1989 and Population Projections: 1989-2040, Washington, D.C.

1990 Population Estimates (1988) and Per Capita Income (1987) for Counties, Incorporated Places and Selected Towns and Townships: Arizona, Nevada, Utah, Washington, D.C.

Internal Materials

Memorandum from State Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services State Office, to State Director, BLM Arizona, dated Jan. 4, 1994. Section 7 Consultation/species list.

**SAN PEDRO RIVER
WILD AND SCENIC RIVER STUDY AREA**

**TUCSON RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

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SAN PEDRO WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the San Pedro River were identified in the Safford District Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the San Pedro River to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The San Pedro River Wild and Scenic River Study Area is ten miles east of Sierra Vista, Arizona, in Cochise County. The San Pedro River drains an area of Northern Mexico in the State of Sonora and flows 140 miles north to feed into the Gila River near Winkelman, Arizona.

The study area is the segment of the river contained in the San Pedro Riparian National Conservation Area between the Mexican border and St. David, Arizona. Historically, the study area is part of an area known as the *San Juan de las Boquillas y Nogales* and the *San Rafael de Valle* land grants.

The study area begins at T 24 S, R 22 E, section 19, and extends downstream to T 18 S, R 21 E, section 21. The San Pedro River study area contains 46 river miles, 38.3 of which are managed by the Bureau of Land Management, and a strip of land that extends out 0.25 miles from the shoreline on either side.

Public lands in the study area are managed by the Tucson Resource Area under the San Pedro River Riparian Management Plan (1989) and the Safford District Resource Management Plan (1993). The remainder of the study area is privately owned (Table SP-1). There are public, private, and state-owned lands adjacent to the study area.

The San Pedro River was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management because the river is free-flowing and has outstandingly remarkable scenic, recreation, fish and wildlife habitat, hydrologic, paleontologic, and cultural values.

The San Pedro River study area suitability assessment found the single 46-mile segment suitable as Recreational. The study area is about 3,900 feet above mean sea level, and lies within Arizona's Basin and Range physiographic province and is in the Chihuahuan desert scrub biotic community.

The area is readily accessible by roads. State Highways 82, 90, and 92 cross the study area. Two county roads, in addition to several dirt roads, also provide access to the river and area. The Southern Pacific Railroad line from Benson to Douglas, Arizona, parallels the river from Hereford to the northern study area boundary. In addition to this active line, several old railroad grades are located in the study area.

Many rights-of-way including natural gas pipelines, water pipelines, utility easements, powerlines, and telephone lines cross the study area, concentrated at the Charleston Road crossing and in the Hereford-Palominas area.

The St. David Irrigation District has a water diversion structure and canal in the northern portion of the study area that supplies water to the agricultural fields near St. David.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

Although the study area has been used for

farming, ranching, mining, and recreational activities, it generally retains its natural appearance.

**TABLE SP-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

SAN PEDRO RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	38.3	0	7.7 ^a	46.0
PERCENT	83	0	17	100
TOTAL ACRES	12,240	0	2,480	14,720
SUBSURFACE MINERALS ACRES	12,290	0	2,430	14,720
PERCENT	83	0	17	100

^a - 3.5 miles of the private land included as part of the eligible river segment are outside the boundary of the San Pedro River Riparian National Conservation Area.

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The study area is in the 56,431 acre San Pedro Riparian National Conservation Area. Since 1989 the Riparian National Conservation Area has been managed under the San Pedro River Riparian Management Plan. The study area does not include any federally designated wilderness areas.

The San Pedro River study area is within the St. David- Clenega Riparian National Conservation Area and Area of Critical Environmental Concern and the San Rafael Riparian National Conservation Area and Area of Critical Environmental Concern.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE SP-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE SAN PEDRO
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS.**

SAN PEDRO RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
San Pedro River Riparian National Conservation Area	54,189	96
San Pedro River Area of Critical Environmental Concern	1,340	9
San Rafael Area of Critical Environmental Concern	370	2
St. David Cienega Area of Critical Environmental Concern	350	2

2. U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service has responsibilities under the Endangered Species Act to recover threatened or endangered wildlife species and their native habitats.

3. State of Arizona

The State of Arizona Department of Water Resources is responsible for allocating and maintaining records of water rights. The Arizona Game and Fish Department is responsible for managing wildlife populations throughout the State.

The Arizona State Land Department is responsible for managing state lands adjacent to the study area.

4. Local Government

The study area is within Cochise County, Arizona. The communities of Sierra Vista, Miracle Valley, St. David, Huachuca City, and Tombstone, Arizona are within ten miles of the study area.

5. Private

The St. David Irrigation District has a water

diversion structure and canal in the northern portion of the study area that supplies water to the agricultural fields near St. David.

The Benson to Douglas portion of the Southern Pacific Railroad rail line runs almost the entire length of the study area.

D. SCOPING

Scoping meetings specifically highlighting the San Pedro River study area were held in Tucson April 13, 1993 and in Sierra Vista April 22, 1993. Thirty-five to 40 people attended the Tucson meeting and 30 to 35 attended the Phoenix meeting.

Issues relating to the San Pedro River study area were raised by the Bureau of Land Management and the public during the development of the Safford District Resource Management Plan scoping and public review, the San Pedro Riparian Management Plan scoping and public review, public scoping sessions held throughout Arizona during 1993, and the environmental impact statement planning, scoping, and public review process.

These issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

the general area of the river study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

Uses or resources raised as issues by the public specifically for the San Pedro River study area include the following:

- Impact on potential commercial and residential development in towns and cities
- Impact on mineral development
- Impact on existing developments such as the rail line and water diversion facilities
- Impact on water rights
- Impact on recreation use
- Impact on riparian resource values
- Impact on federally-listed or candidate fish and wildlife species
- Impact on air quality
- Impact on outstandingly remarkable recreation values
- Impact on outstandingly remarkable fish and wildlife habitat values
- Impact on outstandingly remarkable historic and cultural values
- Impact on outstandingly remarkable cultural resource values
- Impact on outstandingly remarkable paleontologic values
- Impact on outstandingly remarkable hydrologic values

Issues Considered but not Analyzed

- impact on potential commercial and residential development in towns and cities

Congressional action to designate or not designate wild and scenic rivers would have no direct impacts on potential commercial, agricultural, or residential development in towns and cities.

The Bureau of Land Management has no authority over nonfederal land and only can address the public land it administers. In wild

and scenic river administration the management protection would be applied to the entire river study area except for private or state lands.

Congressional action to include the Virgin River in the National Wild and Scenic Rivers System would not affect the use of private property. Designation does not open private lands to public access. The right to buy and sell property will not be affected.

This issue will not be discussed further.

- impact on mineral development

Designation of the San Pedro River as Recreational would not change Bureau of Land Management policies or restrictions regarding minerals development or minerals operations. The study area is withdrawn from further locatable mineral entry, closed to oil and gas leasing, and closed to further mineral material extraction in the riparian zone. No alternative in this environmental impact statement contains management actions that would change the current situation.

This issue will not be discussed further.

- impact on existing developments such as the rail line and water diversion facilities

Designation of the San Pedro River as Recreational would not change Bureau of Land Management policies or restrictions regarding developments such as the railroad.

This issue will not be discussed further.

- impact on water rights

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

A federal reserved water right was granted to that portion of the river within the San Pedro Riparian National Conservation Area by the Arizona-Idaho Conservation Act of 1988. The Bureau of Land Management has quantified this right and submitted notification to the state.

The Safford District has submitted a Statement of Claimant for the adjudication proceedings on the San Pedro watershed to protect the water right. In 1991 the District filed an application to obtain a flood flow water right in the study area for an instantaneous peak flow of 18,200 cfs and a 24 hour volume of 11,300 cfs. The Safford District has received a certificate of water right to an instream flow equal to 11,028 acre feet per year within the river study area.

This issue will not be discussed further.

- impact on federally-listed or candidate fish and wildlife species

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species.

This issue will not be discussed further.

- impact on air quality

The implementation of the management actions associated with any of the alternatives will not have impacts on air quality in the San Pedro River study area because there will be no surface disturbance or development that would release particulate matter.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft environmental impact statement to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the San Pedro River study area under each alternative.

The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation.

These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned management under existing plans.

The following alternatives are addressed:

Recommended alternative (part suitable)
All suitable
No action/not suitable

B. Recommended alternative

The recommended alternative creates two segments consistent with the southern and northern sections of the San Pedro River Riparian National Conservation Area. Both segments are determined to be suitable and recommended for designation as Recreational.

The southern segment is three miles long and consists of two miles of public land and one mile of private land. The northern segment is 41 miles in length, consisting of 36.3 miles of public land and 4.7 miles of private land.

A third segment, a two-mile stretch of private land between the southern and northern

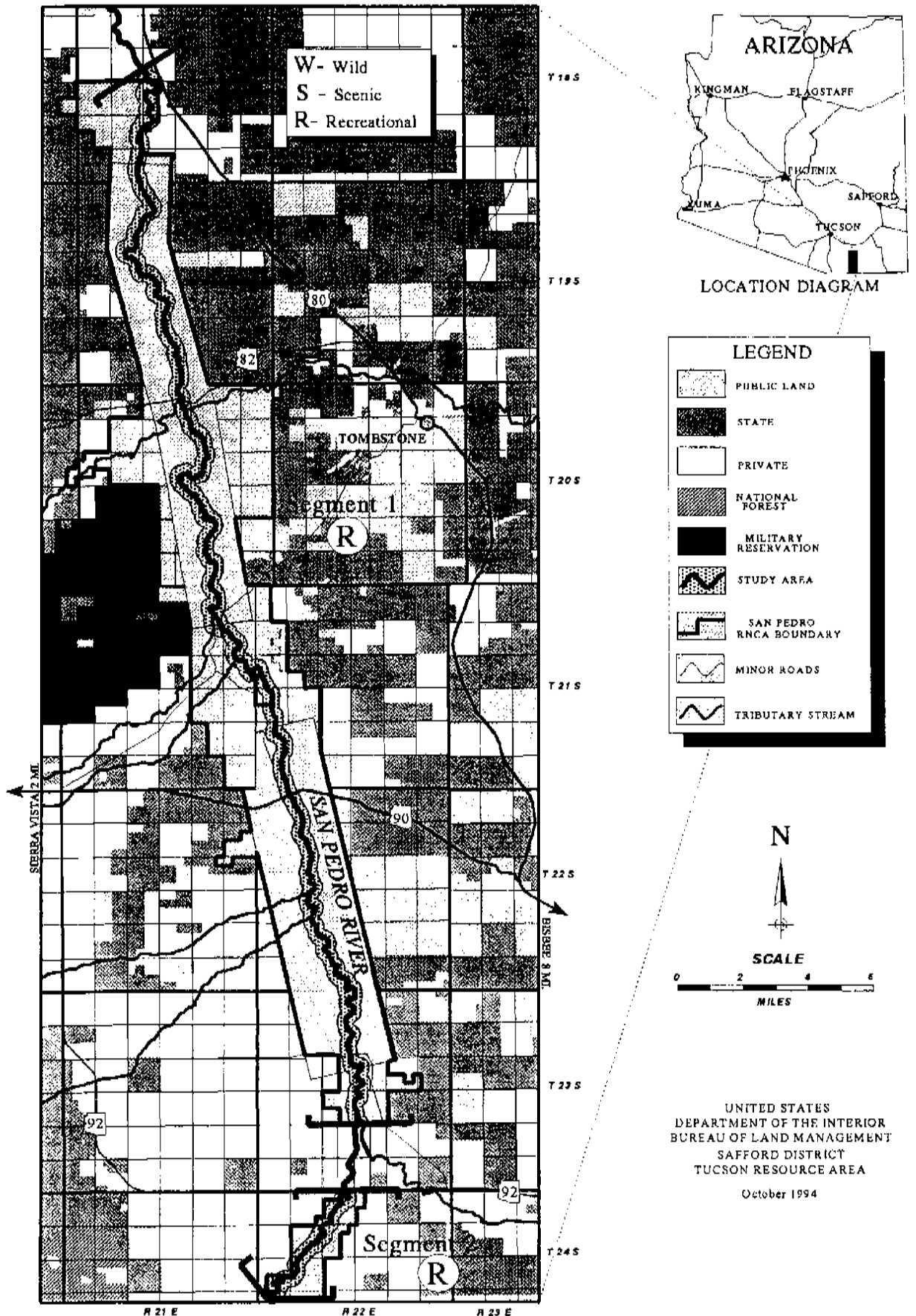
sections of the San Pedro Riparian National Conservation Area is determined to be nonsuitable and is not recommended for designation.

Wild and Scenic River management actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur in the implementation of the recommended alternative for the two Wild segments of the San Pedro River study area. Where the wild and scenic river management actions would overlap ongoing management actions, the more stringent would apply.

- Water quality would be maintained or improved to meet state standards.
- New hydroelectric power facilities would be prohibited.
- Existing low dams, diversion works, riprap, and other minor structures would be permitted.
- New waterway structures could be allowed.
- Existing parallel roads would be maintained.
- Motorized travel is permitted.
- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreation use would be encouraged but public use and access may be regulated and distributed to protect and enhance recreational river values.
- New minor structures for fish and wildlife habitat protection would be permitted.

SAN PEDRO RIVER (Recommended Alternative)



SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

- New rights-of-ways, transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- Instream flow would be quantified. An assessment was developed in order to secure instream flows associated with protecting the outstandingly remarkable values.

Ongoing management actions

Ongoing management actions in the San Pedro River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the San Pedro Riparian National Conservation Area Management Plan and the Safford District Resource Management Plan.

- Efforts would be made to acquire nonfederal lands on a willing seller-willing buyer basis or through exchange.
- Land use authorizations (rights-of-way, leases, temporary use permits) would be considered on a case by case basis.
- Off-highway vehicle use is limited to designated roads and trails.
- Length of stay would be limited to seven days.
- Up to four interpretive displays would be developed.
- Up to four foot/equestrian trails would be developed.
- Up to three dedicated outdoor environmental education field study areas of five to ten acres each would be developed. These facilities will include shade shelters, tables, signs, and small parking areas. Access to and use of these sites would be restricted.
- Up to two campgrounds (San Pedro Ranch house/30-50 units; Hereford/15-30 units) would be developed.
- Up to six small picnic sites and up to three group picnic sites would be developed.
- Trapping would be prohibited except where a need is determined through consultation with the Arizona Game and Fish Department and the Animal and Plant Health Inspection Service.
- Up to ten miles of fence would be constructed to protect riparian areas, according to the Arizona Riparian-Wetland Area Management Strategy.
- Native trees (seedlings and poles) would be planted along the riparian corridor and other areas.
- Wildlife waters would be constructed in the drier upland portion of the area.
- Up to ten miles of fence would be constructed to protect riparian areas in accord with the Arizona Riparian-Wetland Area Management Strategy.
- Revegetation of stream banks would be completed where appropriate.
- Proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area will be completed.
- If sites are determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity.
- If avoidance is not possible, impacts will be mitigated through a data recovery program

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

developed in consultation with the State Historic Preservation Officer.

- Unnecessary wells would be closed and capped.
- Dikes and berms along the east and west sides of the abandoned farm fields would be removed and preexisting drainages would be reestablished.
- Erosion control structures would be built only as needed to protect other resources and watershed values.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines the entire 46 mile length of the San Pedro River in the San Pedro River study area (Sycamore Creek to Horseshoe Ranch) as suitable and recommends it for a Recreational designation.

Wild and Scenic River management actions

Wild and Scenic River designation would require certain management actions to be initiated. In accord with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur in the implementation of the all suitable alternative. Where the wild and scenic river management actions would overlap with ongoing management actions, the more stringent would apply.

- Water quality would be maintained or improved to meet state standards.
- New hydroelectric power facilities would be prohibited.
- Existing low dams, diversion works, riprap, and other minor structures would be permitted.
- New waterway structures could be allowed if the area remains generally natural in appearance and the structures harmonize with

the surrounding environment.

- Existing parallel roads would be maintained.
- Motorized travel is permitted.
- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreation use would be encouraged but public use and access may be regulated and distributed to protect and enhance recreational river values.
- New minor structures for fish and wildlife habitat protection would be permitted.
- New rights-of-ways, transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.

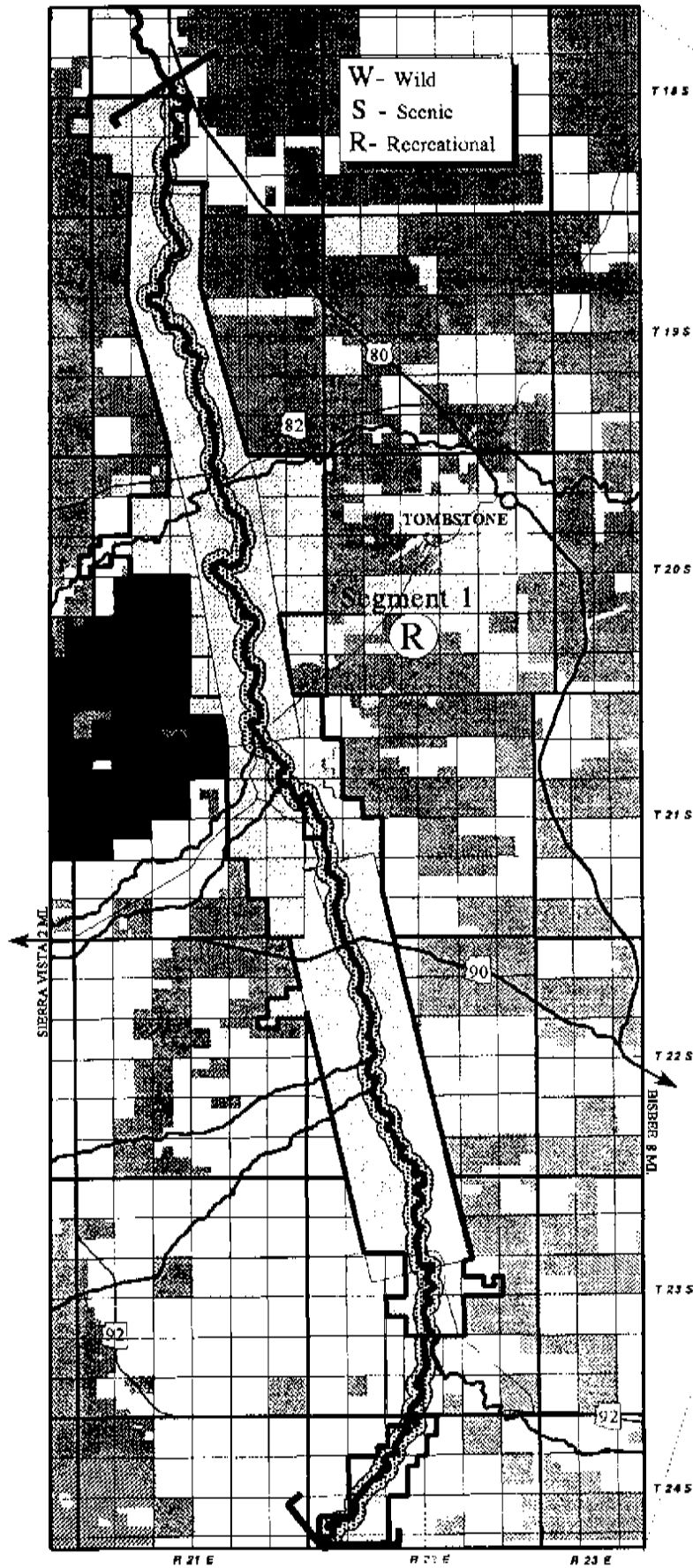
- Instream flow would be quantified. An assessment was developed in order to secure instream flows associated with protecting the outstandingly remarkable values.

Ongoing management actions

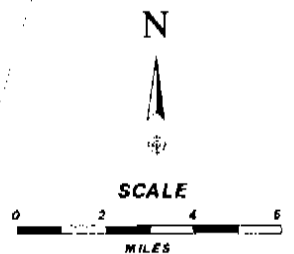
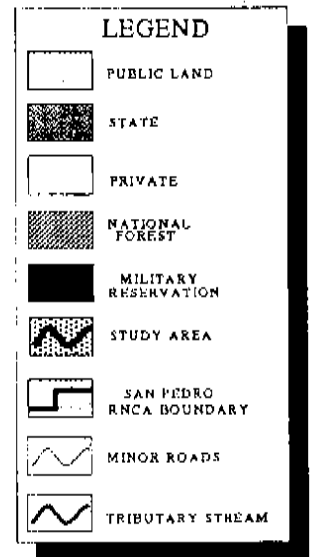
Ongoing management actions in the Pedro River study area would regardless of wild and scenic designation. The following are management actions from the San Riparian National Conservation Management Plan and the Safford District Management Plan.

- Efforts would be made to acquire nonfederal lands on a willing seller-willing buyer basis or through exchange.
- Land use authorizations (rights-of-way, leases, temporary use permits) would be considered on a case-by-case basis.
- Off-highway vehicle use is limited to designated roads and trails.

SAN PEDRO RIVER (All Suitable Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
TUCSON RESOURCE AREA
October 1994

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

- Length of stay would be limited to seven days.
- Up to four interpretive displays would be developed.
- Up to four foot/equestrian trails would be developed.
- Up to three dedicated outdoor environmental education field study areas of five to ten acres each would be developed. These facilities would include shade shelters, tables, signs, and small parking areas. Access to and use of these sites would be restricted.
- Up to two campgrounds (San Pedro Ranch house/30-50 units; Hereford/15-30 units) would be developed.
- Up to six small picnic sites and up to three group picnic sites would be developed.
- Trapping would be prohibited except where a need is determined through consultation with Arizona Game and Fish Department and the Animal and Plant Health Inspection Service.
- Up to ten miles of fence would be constructed to protect riparian areas, according to the Arizona Riparian-Wetland Area Management Strategy.
- Native trees (seedlings and poles) would be planted along the riparian corridor and other areas.
- Wildlife waters would be constructed in the drier upland portion of the area.
- Up to ten miles of fence would be constructed to protect riparian areas in accord with the Arizona Riparian-Wetland Area Management Strategy.
- Revegetation of stream banks would be completed where appropriate.
- Proposals for activities that could result in

increased use or surface disturbance will be reviewed by a cultural resource specialist.

- In most cases, a cultural resource field inventory of the potentially affected area will be completed.
- If sites are determined eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity.
- If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Unnecessary wells would be closed and capped.
- Dikes and berms along the east and west sides of the abandoned farm fields would be removed and preexisting drainages would be reestablished.
- Erosion control structures would be built only as needed to protect other resources and watershed values.

D. NO ACTION ALTERNATIVE

The no action alternative determines the San Pedro to be not suitable and does not recommend designation for the entire San Pedro River study area. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions defined in the San Pedro Riparian Management Plan.

Under the no action alternative the portion of the San Pedro River study area that is within the San Pedro Riparian National Conservation Area would continue to be managed for those values identified in the San Pedro Riparian Management Plan. The areas of critical

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

environmental concern would continue to be managed under administrative protection.

Wild and Scenic River management actions

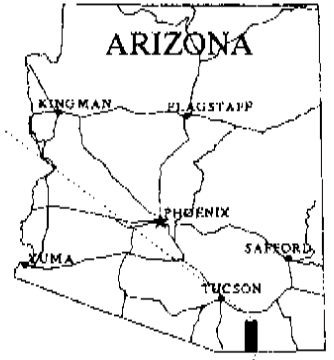
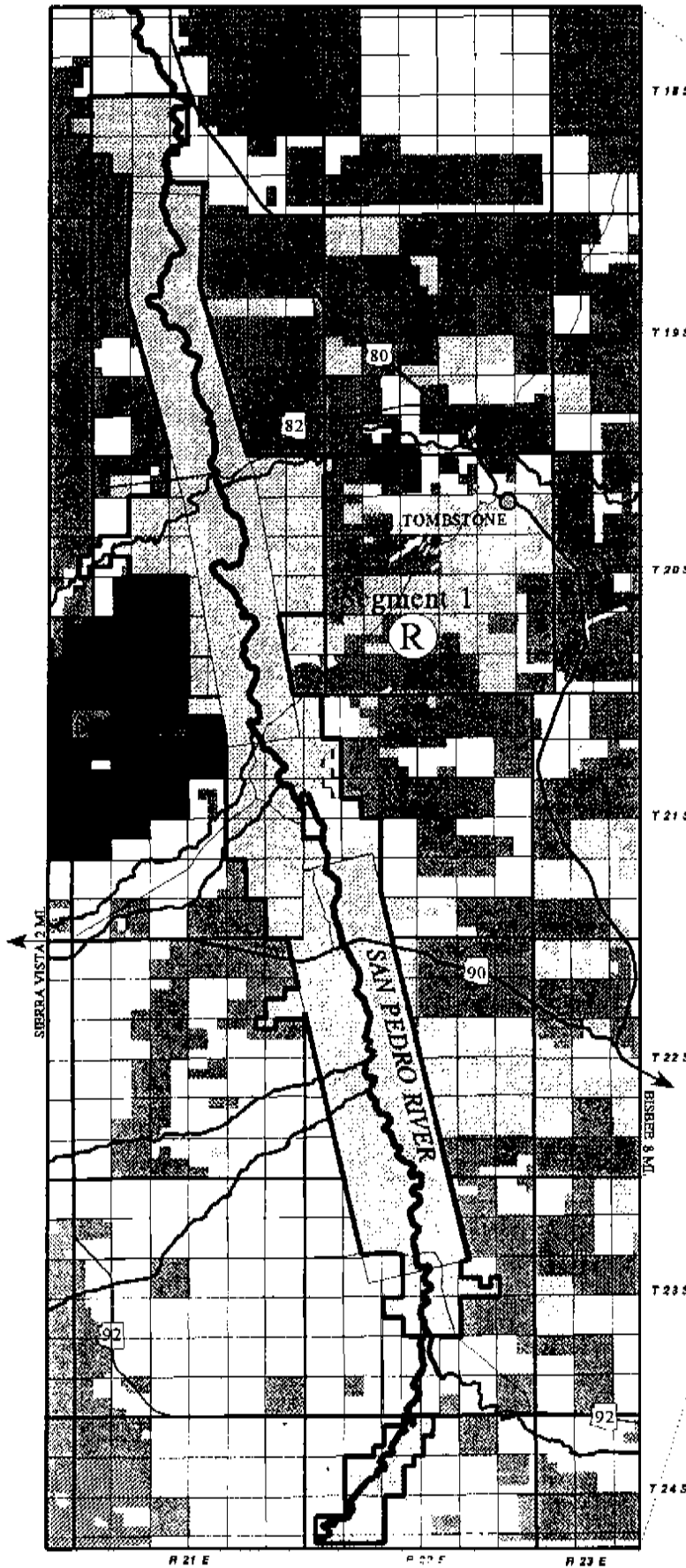
Under the no action alternative the entire San Pedro River study area would be recommended as nonsuitable. There would be no wild and scenic river management actions.

Ongoing management actions

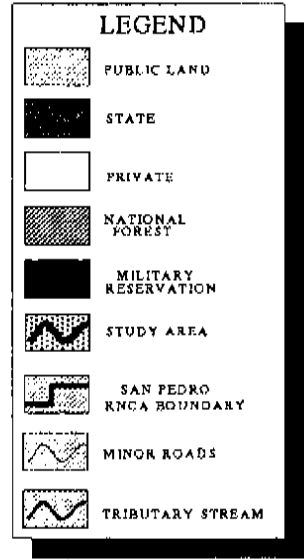
The ongoing management actions listed below summarize selected provisions of the San Pedro Riparian National Conservation Area management plan and the Safford District Resource Management Plan.

- Efforts would be made to acquire nonfederal lands on a willing seller-willing buyer basis or through exchange.
- Land use authorizations (rights-of-way, leases, temporary use permits) would be considered on a case by case basis.
- Off-highway vehicle use is limited to designated roads and trails.
- Length of stay would be limited to seven days.
- Up to four interpretive displays would be developed.
- Up to four foot/equestrian trails would be developed.
- Up to three dedicated outdoor environmental education field study areas of five to ten acres each would be developed. These facilities would include shade shelters, tables, signs, and small parking areas. Access to and use of these sites would be restricted.
- Up to two campgrounds (San Pedro Ranch house/30-50 units; Hereford/15-30 units) would be developed.
- Up to six small picnic sites and up to three group picnic sites would be developed.
- Trapping would be prohibited except where a need is determined through consultation with Arizona Game and Fish Department and the Animal and Plant Health Inspection Service.
- Native trees (seedlings and poles) would be planted along the riparian corridor and other areas.
- Wildlife waters would be constructed in the drier upland portion of the area.
- Up to ten miles of fence would be constructed to protect riparian areas in accord with the Arizona Riparian-Wetland Area Management Strategy.
- Revegetation of stream banks would be completed where appropriate.
- Proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area will be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity.
- If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Unnecessary wells would be closed and capped.

SAN PEDRO RIVER (No Action Alternative)



LOCATION DIAGRAM



SIERRA VISTA 12 MI

FISHERS 8 MI

N



SCALE



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
TUCSON RESOURCE AREA
October, 1994

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

- **Dikes and berms along the east and west sides of the abandoned farm fields would be removed and pre-existing drainages would be reestablished.**
- **Erosion control structures would be built only as needed to protect other resources and watershed values.**

D. ALTERNATIVES CONSIDERED BUT REJECTED

The Arizona Rivers Coalition recommended that 46 miles of the San Pedro River be designated as Scenic. This alternative was considered but rejected because the classification recommended was not consistent with the Bureau of Land Management eligibility determination.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE SP-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative	All suitable	No action/not suitable
Outstandingly Remarkable Scenic Values	No adverse impacts	No adverse impacts	Outstandingly remarkable values would not be protected by special legislation
Outstandingly Remarkable Recreational Values	No adverse impacts	No adverse impacts	Outstandingly remarkable values would not be protected by special legislation
Outstandingly Remarkable Fish and Wildlife Values	No adverse impacts	No adverse impacts	Outstandingly remarkable values would not be protected by special legislation
Outstandingly Remarkable Cultural and Historic Resource Values	No adverse impacts	No adverse impacts	Outstandingly remarkable values would not be protected by special legislation
Outstandingly Remarkable Hydrologic Values	No adverse impacts	No adverse impacts	Outstandingly remarkable values would not be protected by special legislation
Outstandingly Remarkable Paleontological Values	No adverse impacts	No adverse impacts	Outstandingly remarkable values would not be protected by special legislation

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the San Pedro River study area that could be affected by the implementation of the alternatives for recommending the river segments as suitable for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the San Pedro River Riparian Management Plan and Environmental Impact Statement, the Safford District Resource Management Plan, and the San Pedro River study area suitability assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The river is free-flowing and has outstandingly remarkable scenic, recreation, fish and wildlife, cultural, historic, hydrologic, and paleontologic values.

The riparian forest along the San Pedro River is the most recognizable feature of the area, and offers a dramatic visual change from the surrounding vegetation that is dominated by Chihuahuan Desert shrubs. Long, healthy stretches of Fremont cottonwood and Goodding willow dominate the riparian corridor, along with lesser amounts of Arizona ash, walnut, netleaf hackberry, and soapberry.

The natural qualities of this river have made it very popular for recreational activities such as birding/wildlife viewing, hiking, camping, horseback riding, photography, and nature study.

The San Pedro's perennial flow, although sometimes only a trickle, is a rare occurrence in the southwest. The river study area is an outstanding example of a desert river in the southwest and is important wildlife habitat for many species. The combination of aquatic habitat, riparian areas, and upland habitats is rare in this arid region. Animal life in the study area is greatly enhanced by the perennial flow

and its riparian vegetation.

The area supports over 300 species of birds, 80 species of mammals, two native fish species, and more than 40 species of amphibians and reptiles.

Paleontological resources of the area rank among the top in Arizona, and among the best nationwide for Pliocene through Holocene (approximately one to five million years before present) terrestrial deposits.

The area is considered the best in the western hemisphere for paleontological sites associated with early man because of the number of existing and potential sites and the excellent chronological control of those sites.

The fossils of the area have a high potential for yielding important information on mammal evolution and intercontinental dispersal, the earliest humans to occupy North America, and late Cenozoic geology, life, and climate.

The cultural resources of the study area represent a diverse array of site types, cultures, and time periods. Human occupation of the area began about 11,000 years ago. Many sites have exceptional scientific and/or public values at an international level of importance.

The study area provides a unique opportunity for scientific study, public interpretation, and conservation of cultural resources.

B. MINERALS

There are 39 active mining claims in the San Pedro Riparian National Conservation Area, all located in the Charleston area. There are no mineral leases of record in the area. A one-mile stretch of the San Pedro River near Charleston that lies on the southwest edge of the Tombstone mining district is within an area considered favorable for locatable minerals. Mining has occurred in the region, mostly for

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

gold, silver, lead, copper, and zinc ore. The remainder of the study area is considered to have low potential for locatable minerals.

Activities occurring within the St. David Cienega or San Rafael Riparian Area of Critical Environmental Concern require an approved plan of operations for locatable mineral development above the level of casual use.

The entire stretch of the San Pedro River has widespread sand and gravel deposits. Several sand and gravel extraction operations have existed in the past along the river. Mineral material disposal of sand and gravel occurs at one location inside the San Pedro Riparian National Conservation Area outside the riparian area. Sand and gravel extraction is prohibited in the riparian area.

The San Pedro National Conservation Area is closed to any further mineral materials sales, to further locatable mineral entry in the riparian zone, and any oil and gas leasing.

C. LANDS

Public and private residential, agricultural, and commercial development is expected to continue in the communities and rural areas surrounding the study area. Growth of Sierra Vista, Ft. Huachuca, St. David, and Tombstone, Arizona, and the surrounding rural area is expected to place demands on public lands and natural resources.

Accompanying facilities such as roads and utility lines exist on private and public lands in and around the study area. State Highways 82, 90, and 92 cross the study area. Two county roads, in addition to several dirt roads, also provide access to the river and area. The Southern Pacific Railroad line from Benson to Douglas, Arizona, parallels the river from Hereford to the northern study area boundary. In addition to this active line, several old railroad grades are located in the study area.

Many rights-of-way including natural gas

pipelines, water pipelines, utility easements powerlines, and telephone lines cross the study area, concentrated at the Charleston Road crossing and in the Hereford-Palominas area. The St. David Irrigation District has a water diversion structure and canal in the northern portion of the study area that supplies water to the agricultural fields near St. David.

D. RECREATION

The natural qualities of this river have made it very popular for recreational activities such as birding/wildlife viewing, hiking, camping, horseback riding, photography, and nature study. The area attracts people from local communities and from major cities in Arizona, as well as visitors from throughout North America and the world.

Developed sites such as Terrenate, a 17th century Spanish outpost provide opportunities for visitors to learn about the history of the area. Hiking trails and a visitor information center also have been developed.

E. WILDLIFE

The study area is an outstanding example of a desert river in the southwest and is important wildlife habitat for many species. The combination of aquatic habitat, riparian areas, and upland habitats is rare in this arid region. Animal life in the study area is greatly enhanced by the perennial flow and its riparian vegetation. The area supports over 300 species of birds, 84 species of mammals, two native fish species, 14 exotic fish species, and more than 40 species of amphibians and reptiles.

Historically, 13 species of native fish were present in the river. Two of those remain, the longfin dace (*Agosia chrysoaster*) and the desert sucker (*Catostomus clarki*), a federal candidate category 2 species. There are 24 special status (federal or state-listed, proposed or candidate) terrestrial vertebrate species that or known or suspected to occur in the study area.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

According to the U.S. Fish and Wildlife Service the river study area is known or suspected of being habitat for three species federally-listed as endangered, lesser long-nosed bats (Leptonycteris curasoae yerbabuena), American peregrine falcons (Falco peregrinus anatum), and bald eagles (Haliaeetus leucocephalus), and one proposed for listing as endangered, the southwestern willow flycatcher (Empidonax traillii extimus).

The U.S. Fish and Wildlife Service also indicated that 13 Candidate Category 2 species may use the habitat within the study area. These are the Mexican long-tongued bat (Choeronycteris mexicana), California leaf-nosed bat (Macrotus californicus), southwestern cave bat (Myotis velifer brevis), Chiricahua western harvest mouse (Reithrodontomys megalotis arizonensis), yellow-nosed cotton rat (Sigmodon ochrognathus), loggerhead shrike (Lanius ludovicianus), ferruginous hawk (Buteo regalis - wintering only), northern gray hawk (Buteo nitidus maximus), Sonoran desert tortoise (Gopherus agassizii), Texas horned lizard (Phrynosoma cornutum), canyon (giant) spotted whiptail (Cnemidophorus burti), Mexican garter snake (Thamnophis eques), and the desert sucker.

Notable birds include over 25 species of raptors including Mississippi kites (Ictinia mississippiensis), crested caracara (Polyborus plancus), green kingfishers (Chloroceryle americana), and yellow-billed cuckoos (Coccyzus americanus).

Many rodent species, several bat species, mountain lions (Felis concolor), bobcats (Lynx rufus), whitetail deer (Odocoileus virginianus), mule deer (Odocoileus hemionus), javelina (Dicotyles tajaca), and rabbits live all or part of their lives in the study area.

F. VEGETATION

The riparian forest along the San Pedro River is the most recognizable feature of the area, and offers a dramatic visual change from the

surrounding vegetation that is dominated by Chihuahuan Desert shrubs.

Long, healthy stretches of Fremont cottonwood (Populus Fremontii) and Gooding willow (Salix goodingii) dominate the riparian corridor, along with lesser amounts of Arizona ash (Fraxinus velutina), walnut (Juglans major), netleaf hackberry (Celtis reticulata), and soapberry (Sapindus saponaria).

No threatened or endangered plant species are known to exist in the study area, although the U.S. Fish and Wildlife Service indicates that the Huachucua water umbel (Lilaeopsis schaffneriana ssp. recurva), a candidate category 1 species, may be present.

G. CULTURAL AND HISTORIC

The cultural resources of the study area represent a diverse array of site types, cultures, and time periods. Human occupation of the area began about 11,000 years ago. Many sites have exceptional scientific and/or public values at an international level of importance. The study area provides a unique opportunity for scientific study, public interpretation, and conservation of cultural resources.

Paleontological resources of the area rank among the top in Arizona, and among the best nationwide for Holocene to Pliocene (approximately one to five million years before present) terrestrial deposits. The area is considered the best in the western hemisphere for paleontological sites associated with early man because of the number of existing and potential sites and the excellent chronological control of those sites.

The fossils of the area have a high potential for yielding important information on mammal evolution and intercontinental dispersal, the earliest humans to occupy North America, and late Cenozoic geology, life, and climate.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

H. WATER RESOURCES

The San Pedro River starts in northern Sonora, Mexico, and flows north for 140 miles to its confluence with the Gila River. The watershed contains 4,483 square miles, of which 696 are in Mexico.

The floodplain is usually 1/2 miles wide or wider except where bedrock outcrops approach the stream near the Charleston area. Zones of strong artesian pressure occur in the vicinity of Palominas, Hereford, St. David, and Benson.

The highest annual flows are from July to September in response to thunderstorms. A secondary period of rainfall runoff occurs in the winter. Annual low flow periods commonly are in May to June and November.

There are eight permanent springs in the study area. The Upper San Pedro Basin contains several hundred feet of consolidated and unconsolidated sedimentary deposits, most of which are capable of transmitting ground water. These deposits may be more than 1000 feet thick in the southern part of the San Pedro Basin.

The quality of the surface water is good. The designated beneficial uses for the San Pedro as established by the Arizona Department of Environmental Quality are: aquatic and wildlife, incidental human contact, agricultural irrigation, and agricultural livestock watering.

The Safford District has submitted a Statement of Claimant for the adjudication proceedings on the San Pedro watershed to protect the water right. In 1991 the district filed an application to obtain a flood flow water right in the study area for an instantaneous peak flow of 18,200 cfs and a 24 hour volume of 11,300 cfs. The Safford District has received a certificate of water right to an instream flow equal to 11,028 acre feet per year within the river study area.

A federal reserved water right was granted to that portion of the river within the San Pedro Riparian National Conservation Area by the Arizona-Idaho Conservation Act of 1988. The Bureau of Land Management has quantified this right and submitted notification to the state. Developments outside the river study area could affect hydrologic values within the study area. The San Pedro Completion Report, prepared by the Bureau of Land Management, stated that the Cananea Mining Company along the San Pedro River in Mexico has the capacity to deplete 40,000 acre-feet of water from the aquifer upstream. Full operation at this capacity would have an adverse impact on the surface flows of the river segment in Arizona.

One or two of these may be activated in future to provide wildlife water or to supplement natural flow into planned wetland areas. Development of large scale water projects within the study area is not planned or anticipated.

A purported cone of depression under the city of Sierra Vista, a few miles west of the study area, may have been created by water use in Sierra Vista and the Ft. Huachuca military post. Projections indicate the cone of depression will eventually affect surface flow of the San Pedro River.

The San Pedro watershed is currently undergoing water rights adjudication proceedings through the courts and with guidance from the State of Arizona Department of Water Resources. These proceedings will consider all claims and determine apportionment of water resources.

I. LIVESTOCK GRAZING

While the Bureau of Land Management does not regard livestock grazing to be incompatible with the continued existence of the riparian ecosystem, a decision was made in the San

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

Pedro River Riparian Management Plan (1989) to prohibit livestock grazing in the National Conservation Area, except on the Brunchow Hill Allotment, for 15 years. At the end of that period, livestock grazing in the area will be reevaluated.

Grazing occurs on the Brunchow Hill Allotment, which includes a 1/4 mile wide sliver of the San Pedro River study area. Cattle graze the area seasonally. Approximately 300 acres of Brunchow Hill Allotment is within the San Pedro River study area.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the San Pedro River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated Wild and Scenic River.
10. Minerals Development Scenario

In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine.

Large mining operations would be those involving more than five acres and subject to approval of a Bureau of Land Management approved Mining Plan of Operation.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative creates two segments consistent with the southern and northern sections of the San Pedro River Riparian National Conservation Area. The recommended alternative determines both segments to be

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

suitable and recommends them for designation as Recreational.

The southern segment is three miles long and consists of two miles of public land and one mile of private land. The northern segment is 41 miles in length, consisting of 36.3 miles of public land and 4.7 miles of private land.

A third segment, a two-mile stretch of private land between the southern and northern sections of the San Pedro Riparian National Conservation Area is determined to be nonsuitable and is not recommended for designation.

Outstandingly Remarkable Values

The San Pedro River has outstandingly remarkable scenic, recreation, fish and wildlife, hydrologic, paleontologic, historic, and cultural values.

Impacts on Outstandingly Remarkable Scenic Values

The riparian forest along the San Pedro River is the most recognizable feature of the area, and offers a dramatic visual change from the surrounding vegetation that is dominated by Chihuahuan Desert shrubs. Long, healthy stretches of Fremont cottonwood and Goodding willow dominate the riparian corridor, along with lesser amounts of Arizona ash, walnut, netleaf hackberry, and soapberry.

Implementation of the recommended alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable scenic values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable scenic values would be supplied by

the ongoing management activities described in Chapter II. For example, up to ten miles of fence would be constructed to protect riparian areas. Native trees (seedlings and poles) would be planted along the riparian corridor and other areas. Camping would be limited to seven days.

• Conclusion

The outstandingly remarkable scenic values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the recommended alternative would have no adverse impact on scenic values.

Impacts on Outstandingly Remarkable Recreation Values

The natural qualities of this river have made it very popular for recreational activities such as birding/wildlife viewing, hiking, camping, horseback riding, photography, and nature study.

Implementation of the recommended alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable recreation values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable recreation values would be supplied by the ongoing management activities described in Chapter II. For example, under the recommended alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, off-highway vehicle use is limited to designated roads and trails. Length of stay would be limited to seven days. Up to four

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

interpretive displays would be developed. Up to four foot/equestrian trails would be developed. Up to three dedicated outdoor environmental education field study areas of five to ten acres each. Up to two campgrounds (San Pedro Ranch house/30-50 units; Hereford/15-30 units) would be developed. Up to six small picnic sites and up to three group picnic sites would be developed.

• Conclusion

The outstandingly remarkable recreation values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the recommended alternative/part suitable alternative would have no adverse impact on recreation opportunities.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The study area is an outstanding example of a desert river in the southwest and is important wildlife habitat for over 300 species of birds, 84 species of mammals, two native fish species, 14 exotic fish species, and more than 40 species of amphibians and reptiles. Historically, 13 species of native fish were present in the river. Of those, two remain, the longfin dace and the desert sucker.

There are 24 special status (federal or state-listed, proposed or candidate) terrestrial vertebrate species that are known or thought to occur in the study area.

Implementation of the recommended alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable fish and wildlife habitat values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly

remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, under the recommended alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, trapping would be prohibited except where a need is determined through consultation with Arizona Game and Fish Department and the Animal and Plant Health Inspection Service. Up to ten miles of fence would be constructed to protect riparian areas, according to the Arizona Riparian-Wetland Area Management Strategy. Native trees (seedlings and poles) would be planted along the riparian corridor and other areas. Wildlife waters would be constructed in the drier upland portion of the area.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the recommended alternative would have no adverse impact on the outstandingly remarkable fish and wildlife values.

Impacts on Outstandingly Remarkable Paleontologic Values

Paleontological resources of the area rank among the top in Arizona, and among the best nationwide for Pliocene through Holocene (approximately one to five million years before present) terrestrial deposits. The area is considered the best in the western hemisphere for paleontological sites associated with early man because of the number of existing and potential sites and the excellent chronological control of those sites.

The fossils of the area have a high potential for yielding important information on mammal evolution and intercontinental dispersal, the

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

earliest humans to occupy North America, and late Cenozoic geology, life, and climate.

Implementation of the recommended alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly paleontologic values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable paleontologic values would be supplied by the ongoing management activities described in Chapter II. For example, the Bureau of Land Management will construct foot trails and interpretive displays for paleontological resources sites. Important sites will be monitored every three to five years and exposed fossils collected. Fossils threatened by human and natural disturbance will also be collected.

• Conclusion

The outstandingly remarkable paleontologic values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the recommended alternative would have no adverse impact on paleontologic values.

Impacts on Outstandingly Remarkable Historic and Cultural Resource Values

The cultural and historic resources of the study area represent a diverse array of site types, cultures, and time periods. Human occupation of the area began about 11,000 years ago. Many sites have exceptional scientific and/or public values at an international level of importance.

The study area provides a unique opportunity for scientific study, public interpretation, and conservation of cultural resources.

Implementation of the recommended alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable cultural resource values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable cultural resource values would be supplied by the ongoing management activities described in Chapter II. For example, proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area will be completed. If sites are evaluated as eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

• Conclusion

The outstandingly remarkable cultural resource values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the recommended alternative would have no adverse impact on cultural resource values.

Impacts on Outstandingly Remarkable Hydrologic Values

The San Pedro River starts in northern Sonora, Mexico, and flows north for 140 miles to its confluence with the Gila River. The watershed contains 4,483 square miles, of which 696 are in Mexico. The floodplain is usually 1/2 miles wide or wider except where bedrock outcrops approach the stream near the Charleston area. Zones of strong artesian pressure occur in the

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

vicinity of Palominas, Hereford, St. David, and Benson.

There are eight permanent springs in the study area. The quality of the surface water is good. The designated beneficial uses for the San Pedro as established by the Arizona Department of Environmental Quality are: aquatic and wildlife, incidental human contact, agricultural irrigation, and agricultural livestock watering.

Developments outside the river study area could affect hydrologic values within the study area. The San Pedro Completion Report, prepared by the Bureau of Land Management, stated that the Carrera Mining Company along the San Pedro River in Mexico has the capacity to deplete 40,000 acre-feet of water from the aquifer upstream. Full operation at this capacity would have an adverse impact on the surface flows of the river segment in Arizona.

A purported cone of depression under the city of Sierra Vista, a few miles west of the study area, may have been created by water use in Sierra Vista and the Ft. Huachuca military post. Projections indicate the cone of depression will eventually affect surface flow of the San Pedro River.

The San Pedro watershed is currently undergoing water rights adjudication proceedings through the courts and with guidance from the Arizona Department of Water Resources. These proceedings will consider all claims and determine apportionment of water resources.

Implementation of the Proposed would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly hydrologic values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly

remarkable hydrologic values would be supplied by the ongoing management activities described in Chapter II. For example, unnecessary wells would be closed and capped. Dikes and berms along the east and west sides of the abandoned farm fields would be removed and preexisting drainages would be reestablished. Erosion control structures would be built only as needed to protect other resources and watershed values.

• Conclusion

The outstandingly remarkable hydrologic values would have long-term legislative protection under the Wild and Scenic Rivers Act. There would be no adverse impact on the outstandingly remarkable hydrologic values from the implementation of the recommended alternative.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the San Pedro River study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the San Pedro River Riparian Management Plan.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

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Irreversible and Irrecoverable commitments of resources involved in the recommended alternative.

Under the recommended alternative new mineral entry would not be allowed, and resource management activities would be subject to the San Pedro River Riparian Management Plan.

National conservation areas are created by congressional designation and subject to change only through further congressional action.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the San Pedro River Riparian Management Plan.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The all suitable alternative determines the entire 46 mile length of the San Pedro River in the San Pedro River study area (Sycamore Creek to Horseshoe Ranch) as suitable and recommends it for a Recreational designation.

Impacts on Outstandingly Remarkable Values

The San Pedro River has outstandingly remarkable scenic, recreation, fish and wildlife, hydrologic, paleontologic, and cultural values.

Impacts on Outstandingly Remarkable Scenic Values

The riparian forest along the San Pedro River is the most recognizable feature of the area, and offers a dramatic visual change from the surrounding vegetation that is dominated by Chihuahuan Desert shrubs. Long, healthy stretches of Fremont cottonwood and Goodding willow dominate the riparian corridor, along with lesser amounts of Arizona ash, walnut, netleaf hackberry, and soapberry.

Implementation of the all suitable alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable scenic values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, up to ten miles of fence would be constructed to protect riparian areas. Native trees (seedlings and poles) would be planted along the riparian corridor and other areas. Camping would be limited to seven days.

• Conclusion

The outstandingly remarkable scenic values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the all suitable alternative would have no adverse impact on scenic values.

Impacts on Outstandingly Remarkable Recreation Values

The natural qualities of this river have made it

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

very popular for recreational activities such as birding/wildlife viewing, hiking, camping, horseback riding, photography, and nature study.

Implementation of the all suitable alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable recreation values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable recreation values would be supplied by the ongoing management activities described in Chapter II. For example, under the all suitable alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, off-highway vehicle use is limited to designated roads and trails. Length of stay would be limited to seven days. Up to four interpretive displays would be developed. Up to four foot/equestrian trails would be developed. Up to three dedicated outdoor environmental education field study areas of five to ten acres each. Up to two campgrounds (San Pedro Ranch house/30-50 units; Hereford/15-30 units) would be developed. Up to six small picnic sites and up to three group picnic sites would be developed.

• Conclusion

The outstandingly remarkable recreation values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the all suitable alternative would have no adverse impact on recreation opportunities.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

The study area is an outstanding example of a desert river in the southwest and is important wildlife habitat for over 300 species of birds, 84 species of mammals, 2 native fish species, 14 exotic fish species, and more than 40 species of amphibians and reptiles. Historically, 13 species of native fish were present in the river. Of those, two remain, the longfin dace and the desert sucker.

There are 24 special status (federal or state-listed, proposed or candidate) terrestrial vertebrate species that are known or thought to occur in the study area.

Implementation of the all suitable alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly remarkable fish and wildlife habitat values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, under the all suitable alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, trapping would be prohibited except where a need is determined through consultation with Arizona Game and Fish Department and the Animal and Plant Health Inspection Service. Up to ten miles of fence would be constructed to protect riparian areas, according to the Arizona Riparian-Wetland Area Management Strategy. Native trees (seedlings and poles) would be planted along the riparian corridor and other areas. Wildlife waters would

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be constructed in the drier upland portion of the area.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the all suitable alternative would have no adverse impact on the outstandingly remarkable fish and wildlife values.

Impacts on Outstandingly Remarkable Paleontologic Values

Paleontological resources of the area rank among the top in Arizona, and among the best nationwide for Pliocene through Holocene (approximately one to five million years before present) terrestrial deposits. The area is considered the best in the western hemisphere for paleontological sites associated with early man because of the number of existing and potential sites and the excellent chronological control of those sites.

The fossils of the area have a high potential for yielding important information on mammal evolution and intercontinental dispersal, the earliest humans to occupy North America, and late Cenozoic geology, life, and climate.

Implementation of the all suitable alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly paleontologic values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable paleontologic values would be supplied by the ongoing management activities described in Chapter II. For example, the Bureau of Land Management will construct foot

trails and interpretive displays for paleontological resources sites. Important sites will be monitored every three to five years and exposed fossils collected. Fossils threatened by human and natural disturbance will also be collected.

• Conclusion

The outstandingly remarkable paleontologic values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the all suitable alternative would have no adverse impact on paleontologic values.

Impacts on Outstandingly Remarkable Historic and Cultural Resource Values

The cultural and historic resources of the study area represent a diverse array of site types, cultures, and time periods. Human occupation of the area began about 11,000 years ago. Many sites have exceptional scientific and/or public values at an international level of importance.

The study area provides a unique opportunity for scientific study, public interpretation, and conservation of cultural resources.

Implementation of the all suitable alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly cultural resource values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable cultural resource values would be supplied by the ongoing management activities described in Chapter II. For example, proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a

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cultural resource field inventory of the potentially affected area will be completed. If sites are evaluated as eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

• Conclusion

The outstandingly remarkable cultural and historic resource values would have long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the all suitable alternative would have no adverse impact on cultural resource values.

Impacts on Outstandingly Remarkable Hydrologic Values

The San Pedro River starts in northern Sonora, Mexico, and flows north for 140 miles to its confluence with the Gila River. The watershed contains 4,483 square miles, of which 696 miles are in Mexico. The floodplain is usually 1/2 miles wide or wider except where bedrock outcrops approach the stream near the Charleston area. Zones of strong artesian pressure occur in the vicinity of Palominas, Hereford, St. David, and Benson.

There are eight permanent springs in the study area. The quality of the surface water is good. The designated beneficial uses for the San Pedro as established by the Arizona Department of Environmental Quality are: aquatic and wildlife, incidental human contact, agricultural irrigation, and agricultural livestock watering.

Developments outside the river study area could affect hydrologic values within the study area. The San Pedro Completion Report, prepared by the Bureau of Land Management, stated that the Carrera Mining Company along the San Pedro River in Mexico has the capacity to deplete 40,000 acre-feet of water from the aquifer

upstream. Full operation at this capacity would have an adverse impact on the surface flows of the river segment in Arizona.

A purported cone of depression under the city of Sierra Vista, a few miles west of the study area, may have been created by water use in Sierra Vista and the Ft. Huachuca military post. Projections indicate the cone of depression will eventually affect surface flow of the San Pedro River.

The San Pedro watershed is currently undergoing water rights adjudication proceedings through the courts and with guidance from the State of Arizona Department of Water Resources. These proceedings will consider all claims and determine apportionment of water resources.

Implementation of the all suitable alternative would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have direct and adverse effects on the river and its immediate environment. This action would protect the outstandingly hydrologic values by ensuring the waterway would remain unchanged.

Additional protection for the outstandingly remarkable hydrologic values would be supplied by the ongoing management activities described in Chapter II. For example, unnecessary wells would be closed and capped. Dikes and berms along the east and west sides of the abandoned farm fields would be removed and preexisting drainages would be reestablished. Erosion control structures would be built only as needed to protect other resources and watershed values.

• Conclusion

The outstandingly remarkable hydrologic values would have long-term legislative protection under the Wild and Scenic Rivers Act. There would be no adverse impact on the

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outstandingly remarkable hydrologic values from the implementation of the all suitable alternative.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

The no action alternative determines the San Pedro to be not suitable and recommends nondesignation for the entire San Pedro River study area. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions defined in the San Pedro Riparian Management Plan.

The no action alternative recommends nondesignation for the entire San Pedro River study area. No Wild and Scenic River management actions would apply. None of the outstandingly remarkable values identified in the Eligibility evaluation would receive the long-term legislative protection of the Wild and Scenic Rivers Act.

Under the no action alternative the portion of the San Pedro River study area that is within the San Pedro Riparian National Conservation Area and would continue to be managed for those values identified in the San Pedro Riparian Management Plan.

The remainder, within the Saint David Cienega or San Rafael Riparian Areas of Critical Environmental Concern would continue to be managed according the management prescriptions in the Riparian Management Plan and the plans for those Areas of Critical Environmental Concern.

Impacts on Outstandingly Remarkable Values

The San Pedro River has outstandingly remarkable scenic, recreation, fish and wildlife, hydrologic, paleontologic, and cultural values.

Impact on the Outstandingly Remarkable Scenic Values

The riparian forest along the San Pedro River is the most recognizable feature of the area, and offers a dramatic visual change from the surrounding vegetation that is dominated by Chihuahuan Desert shrubs. Long, healthy stretches of Fremont cottonwood and Gooding willow dominate the riparian corridor, along with lesser amounts of Arizona ash, walnut, netleaf hackberry, and soapberry.

Under the no action alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, up to ten miles of fence would be constructed to protect riparian areas. Native trees (seedlings and poles) would be planted along the riparian corridor and other areas. Camping would be limited to seven days.

• Conclusion

Under the no action alternative the outstandingly remarkable scenic values would not receive special protection under the Wild and Scenic Rivers Act.

Impacts on the Outstandingly Remarkable Recreation Values

The natural qualities of this river have made it very popular for recreational activities such as birding/wildlife viewing, hiking, camping, horseback riding, photography, and nature study.

Under the no action alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, off-highway vehicle use is limited to designated roads and trails. Length of stay

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would be limited to seven days. Up to four interpretive displays would be developed. Up to four foot/equestrian trails would be developed. Up to three dedicated outdoor environmental education field study areas of five to ten acres each. Up to two campgrounds (San Pedro Ranch house/30-50 units; Hereford/15-30 units) would be developed. Up to six small picnic sites and up to three group picnic sites would be developed.

- **Conclusion**

Under the no action alternative the outstandingly remarkable recreation values would not receive special protection under the Wild and Scenic Rivers Act.

Impacts on the Outstandingly Remarkable Fish and Wildlife Habitat Values

The area is an outstanding example of a desert river and is important wildlife habitat for over 300 species of birds, 80 species of mammals, two native fish species, and more than 40 species of amphibians and reptiles.

Under the no action alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, trapping would be prohibited except where a need is determined through consultation with Arizona Game and Fish Department and the Animal and Plant Health Inspection Service. Up to ten miles of fence would be constructed to protect riparian areas, according to the Arizona Riparian-Wetland Area Management Strategy. Native trees (seedlings and poles) would be planted along the riparian corridor and other areas. Wildlife waters would be constructed in the drier upland portion of the area.

- **Conclusion**

Under the no action alternative the outstandingly remarkable fish and wildlife habitat

values would not receive special protection under the Wild and Scenic Rivers Act.

Impacts to Outstandingly Remarkable Paleontologic Values

Paleontological resources of the area rank among the top in Arizona, and among the best nationwide for Holocene through Pliocene (approximately one to five million years before present) terrestrial deposits. The area is considered the best in the western hemisphere for paleontological sites associated with early man because of the number of existing and potential sites and the excellent chronological control of those sites.

The fossils of the area have a high potential for yielding important information on mammal evolution and intercontinental dispersal, the earliest humans to occupy North America, and late Cenozoic geology, life, and climate.

- **Conclusion**

Under the no action alternative the outstandingly remarkable paleontologic values would not receive special protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Historic and Cultural Resource Values

The cultural and historic resources of the study area represent a diverse array of site types, cultures, and time periods. Human occupation of the area began about 11,000 years ago. Many sites have exceptional scientific and/or public values at an international level of importance.

The study area provides a unique opportunity for scientific study, public interpretation, and conservation of cultural and historic resources.

In addition, proposals for activities that could result in increased use or surface disturbance will be reviewed by a cultural resource specialist. In most cases, a cultural resource

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field inventory of the potentially affected area will be completed. If sites are evaluated as eligible for the National Register of Historic Places, in consultation with the State Historic Preservation Officer, they will be avoided by the proposed activity. If avoidance is not possible, impacts will be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

- **Conclusion**

Under the no action alternative the outstandingly remarkable cultural and historic resource values would not receive special protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Hydrologic Values

The San Pedro River starts in northern Sonora, Mexico, and flows north for 140 miles to its confluence with the Gila River. The watershed contains 4,483 square miles, of which 696 miles are in Mexico. The floodplain is usually 1/2 miles wide or wider except where bedrock outcrops approach the stream near the Charleston area. Zones of strong artesian pressure occur in the vicinity of Palominas, Hereford, St. David, and Benson.

There are eight permanent springs in the study area. The quality of the surface water is good. The designated beneficial uses for the San Pedro as established by the State of Arizona Department of Environmental Quality are: aquatic and wildlife, incidental human contact, agricultural irrigation, and agricultural livestock watering.

Developments outside the river study area could affect hydrologic values within the study area. The San Pedro Completion Report, prepared by the Bureau of Land Management, stated that the

Carrera Mining Company along the San Pedro River in Mexico has the capacity to deplete 40,000 acre feet of water from the aquifer upstream. Full operation at this capacity would have an adverse impact on the surface flows of the river segment in Arizona.

Development of large scale water projects within the study area is not planned or anticipated. A purported cone of depression under the city of Sierra Vista, a few miles west of the study area, may have been created by water use in Sierra Vista and the Ft. Huachuca military post. Projections indicate the cone of depression will eventually affect surface flow of the San Pedro River.

The San Pedro watershed is currently undergoing water rights adjudication proceedings through the courts and with guidance from the State of Arizona Department of Water Resources. These proceedings will consider all claims and determine apportionment of water resources.

Under the no action alternative management of the area would be under protection provided by the San Pedro National Riparian Conservation Area Riparian Management Plan.

In addition, unnecessary wells would be closed and capped. Dikes and berms along the east and west sides of the abandoned farm fields would be removed and preexisting drainages would be reestablished. Erosion control structures would be built only as needed to protect other resources and watershed values.

- **Conclusion**

There would be no adverse impact on the outstandingly remarkable hydrologic values from the implementation of the no action alternative.

SAN PEDRO RIVER WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The San Pedro River Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that the San Pedro River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford District Resource Management Plan is on file at the Tucson Resource Area Office, Tucson, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the San Pedro River study area were held in Tucson April 13, 1993 and in Sierra Vista April 22, 1993. Thirty-five to 40 people attended the Tucson meeting and 30 to 35 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and

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informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shivwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermilion Resource Area.

B. Smith, Renewable Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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REFERENCES

Arizona Rivers Coalition

- 1991 Arizona Rivers: Lifeblood of the Desert; A Citizens' Proposal for the Designation of Rivers in Arizona, Phoenix.

Public Laws

- 1973 P.L. 100-478, Endangered Species Act of 1973, as amended.
- 1976 P.L. 94-579, Federal Land Policy and Management Act of 1976.
- 1969 P.L. 91-190, National Environmental Policy Act of 1969.
- 1968 P.L. 90-542, Wild and Scenic Rivers Act of 1968.

U.S. Bureau of Land Management

- 1993 Safford Resource Management Plan Amendment, Safford, Arizona.
- 1993 San Pedro River Wild and Scenic River Suitability Assessment, Tucson, Arizona.
- 1992 Potential Wild and Scenic Rivers, Arizona State Office, Phoenix, Arizona.
- 1989 San Pedro River Riparian Management Plan, Tucson, Arizona.
- ND Analysis of Water Resources and Water-Dependent Resources in Support of Instream Flow Water Rights, San Pedro River, Arizona, Fairbank, Arizona, San Pedro Project Office, .
- ND Assessment of Water Conditions and Management Opportunities in Support of Riparian Values, Denver Service Center, Denver, Colorado.

U.S. Geological Survey

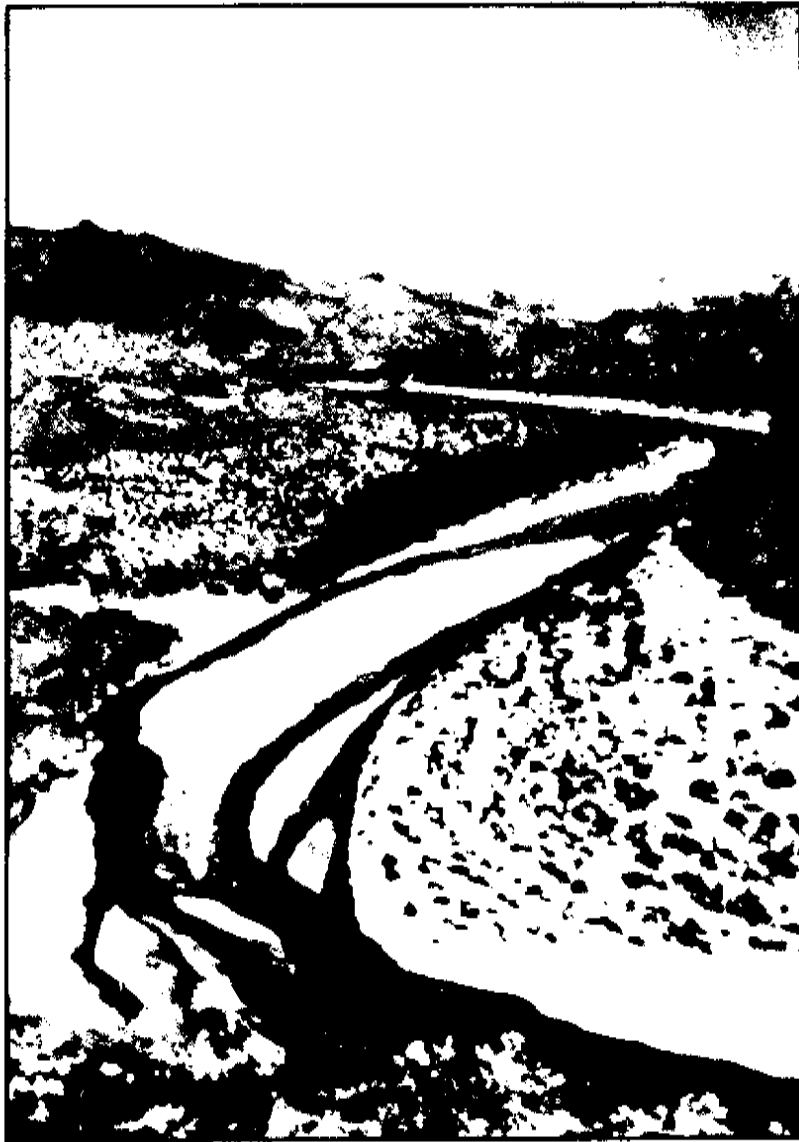
- 1992 Geomorphic Evolution of the San Pedro River Channel Since 1900 in the San Pedro Riparian National Conservation Area.

Bureau of Land Management, 1994

**SANTA MARIA RIVER
WILD AND SCENIC RIVER STUDY AREA**

**KINGMAN RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

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SANTA MARIA WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Santa Maria River were identified in the Kingman Resource Management Plan (1993) as eligible for further study in the Wild and Scenic River evaluation process. The purpose of this action is to determine the suitability for recommending these portions of the Santa Maria River to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Santa Maria River Wild and Scenic River Study Area is located about ten miles south of Bagdad, Arizona. The eastern limit of the river study area is in Yavapai County. The river area extends west into Mohave County, and becomes the boundary between La Paz County and Mohave County east of Alamo Lake. The study area extends from the public land boundary in T. 13 N., R. 8 W, section 1 to lands withdrawn for Alamo Lake.

The Santa Maria River study area consists of two segments that total 35 river miles along with a strip of land 0.25 miles from the mean annual high water mark on either shoreline. The river is free-flowing through the study area. Segment 1 covers the area from U.S. Highway 93 to Alamo Lake. Forty-two percent of the lands associated with segment 1 are managed by the Bureau of Land Management. Segment 1 is classified as

Scenic in the Kingman Resource Management Plan. Segment 2 extends from the Kingman Resource Area boundary to U.S. Highway 93. Eighty-three percent of segment 2 is public land. Segment 2 is classified as Wild in the Kingman Resource Management Plan.

Public lands in the study area are managed by the Kingman and Lower Gila resource areas. The region adjacent to the wild and scenic river study area is a mixture of private, public, and state-owned lands.

The river flows through a section of the Basin and Range Physiographic Province. Vegetation in the area is typical of Sonoran Desertscrub and Arizona Upland Biotic Communities.

The Santa Maria River is a perennial stream with intermittent stretches. The intermittent south fork of the Santa Maria, which is fed by Waterman Creek, drains the area around Grayback Mountain and joins the main river at Highway 93. The Santa Maria is fed primarily by Sycamore Creek, along with Little Sycamore Wash and Kirkland Creek; these creeks and washes drain the Santa Maria Mountains, Cypress Mountain, Sheridan Mountain, and the mountains west of Skull Valley, and feed into Alamo Lake. Much of the upper watershed is in the Prescott National Forest.

Segment 1 has outstandingly remarkable scenic and fish and wildlife habitat values. Segment 2 has outstandingly remarkable fish and wildlife habitat values.

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE SM-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

SANTA MARIA RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	23.3	7.7	7.8	38.8
PERCENT	60.0	20.0	20.0	100.0
TOTAL ACRES	7,000	2,490	2,430	11,920
PERCENT	59.0	20.8	20.2	100.0

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The Kingman Resource Management Plan provides general management guidance for the wild and scenic river study area. Parts of segment 1 flow through the Arrastra Mountain Wilderness and through the Three Rivers Area of Critical Environmental Concern.

This area of critical environmental concern has recreation, scenic, riparian, and wildlife values that are protected by management prescriptions designed to minimize impacts from human activities.

Wildlife populations and habitats in the Santa Maria River study area are managed in accordance with the Lower Gila North Habitat Management Plan, a cooperative Bureau of Land Management - Arizona Game and Fish Department document.

There are four grazing allotments in segment 1. The Tres Alamos Allotment has an allotment management plan. Currently there are no other allotment management plans in the area.

**TABLE SM-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE SANTA MARIA
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

SANTA MARIA RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Arrastra Mountain Wilderness	4,270	35.6
Three Rivers Riparian Area of Critical Environmental Concern	1,060	8.8

2. U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service has responsibilities under the Endangered Species

Act to stabilize and recover threatened or endangered wildlife species and their native habitats.

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

3. U.S. Forest Service

The U.S. Forest Service manages much of the headwaters of Sycamore Creek, a tributary of the Santa Maria River west of Bismarck Mountain. These headwaters include the Santa Maria Mountains, Cypress Mountain, Sheridan Mountain, the mountains west of Skull Valley, and Cottonwood Canyon.

4. The U.S. Army Corps of Engineers

The Alamo Lake area is managed by the U.S. Army Corps of Engineers. In 1948, Public Land Order 492 established a withdrawal on approximately 19,400 acres of both public and non-public land for the construction and operation of Alamo Dam.

5. State of Arizona

The Arizona State Land Department manages several state-owned sections along the river adjacent to the study area. The Arizona Department of Water Resources is responsible for allocating and maintaining records of water rights.

The Arizona Game and Fish Department is responsible for managing wildlife populations throughout the State. **Fish and wildlife on lands within the Alamo Wildlife Area are under the primary management authority of the Department.**

In 1969, the Corps of Engineers entered into a recreation lease with the Arizona State Parks Board for the Alamo Lake State Park. The park is one of the major recreational fishing areas in Arizona.

Under an agreement between the Corps of Engineers and the Arizona Game and Fish Department, the Department manages wildlife in the Alamo Wildlife Area, which incorporates lands withdrawn under Public Land Order 492. The Department became the lead agency in the Bald Eagle Nest Watch

Program in 1991.

6. Local Government Agencies

Portions of the Santa Maria River study area are in Yavapai, Mohave and La Paz Counties.

7. Private

There are 7.8 miles of private lands fronting the river representing 20 percent of the total miles. The lands are used for residences, ranching and agriculture.

D. SCOPING

Scoping meetings specifically highlighting the Santa Maria River study area were held in Bagdad April 5, 1993, Kingman April 6, 1993, and Phoenix April 14, 1993. Ninety-five to 100 people attended the Bagdad meeting, 17 to 20 the Kingman meetings, and 55 to 60 attended the Phoenix meeting.

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the wild and scenic river study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

Uses or resources raised as issues include:

- Impact on potential commercial and residential development in towns and cities
- Impact on mineral development
- Impact on water rights
- Impact on recreation use
- Impact on federally-listed or candidate fish and wildlife species.
- Impact and cost to the agency and public of dual-designation or overlapping designations of areas of public land as wilderness and wild and scenic river areas
- Impact on air quality

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

- Impact on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable fish and wildlife habitat values

Issues Considered but not Discussed Further

- impact on potential commercial and residential development in towns and cities

The implementation of alternatives considered in this document would not measurably affect population, local economy or the potential commercial and residential development in towns and cities.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands managed by the Bureau of Land Management. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- impact on water rights

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be

determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

A federal reserved water right was granted to the portion of the river in the Arrastra Mountain Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right would be determined through an instream flow assessment of wilderness values and notification was given to the state.

This issue will not be discussed further.

- impact on recreation

Currently recreation use in the Santa Maria Wild and Scenic River study area is considered to be low. No statistics exist but estimates indicate visitor use is less than 1,000 days annually. Hunting, off-highway vehicle travel, hiking and backpacking are the dominant uses.

There are no recreational facilities in the river study area and none are planned. Under two of the alternatives (recommended alternative and all suitable) the designation of segment 1 as a wild and scenic river could result in its use as a travel corridor through the wilderness. The increase in visitor use would not be large due to the fact that part of the area is already designated as a wilderness and has already received substantial media exposure that attracts visitors. No substantive change in

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

recreational use is anticipated in the foreseeable future.

Recreation would not be impacted by any of the implementation of any of the alternatives and this issue will not be discussed further.

- Impact on federally-listed or candidate fish and wildlife species.

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species.

This issue will not be discussed further.

- Impact on air quality

Management actions associated with the implementation of the alternatives would not directly or indirectly affect air quality because there would be no surface disturbance or development that would release particulate matter.

This issue will not be discussed further.

- impact and cost to the agency and public of dual-designation or overlapping designations of areas of public land as wilderness and wild and scenic river areas.

There are no environmental impacts from dual management designation since the management actions would always comply with the most stringent requirements.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Santa Maria River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation.

These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative (part suitable)
All suitable
No action/not suitable

B. Recommended alternative

The recommended alternative determines that 17.4 miles (4,760 BLM acres) of the 21-mile long segment 1 are suitable and would be recommended for designation with a Wild classification. The remaining 3.4 miles of segment 1 and all 17.8 miles of segment 2, totalling 21.2 miles are determined to be nonsuitable and would not be recommended for designation.

Much of segment 1 is in the Arrastra Mountain Wilderness Area. Management of that portion would comply with the standards of the Wilderness Act.

Wild and Scenic management actions

Wild and scenic river designation would require

certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur on the public lands in the Santa Maria River study area segment 1 designated as Wild. When wild and scenic river management actions overlap ongoing management actions, the more stringent would be applied.

- The Wild segment would be withdrawn from locatable mineral entry and closed to oil and gas leasing. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- Mining claims would be restricted to patents on the mineral estate.
- Water quality would be maintained or improved.
- Hydroelectric power facilities would be prohibited.
- No new flood control dams, levees, or other works would be permitted.
- All water supply dams and major diversions would be prohibited.
- Construction of new roads or trails for motorized travel would be prohibited.
- Normally, motorized use would be prohibited in a Wild river area. Exceptions could be for search and rescue and other emergency situations.
- Campgrounds, interpretive centers, or administrative headquarters in the river corridor would be prohibited. Simple comfort and convenience facilities could be permitted.
- Recreation use would be encouraged in Wild

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

river areas but public use and access could be regulated.

- Wood cutting would not be permitted except when needed to clear trails, for visitor safety or to control fire.
- Livestock grazing use would be managed in accordance with provisions in the appropriate allotment management plans.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable applicable values.

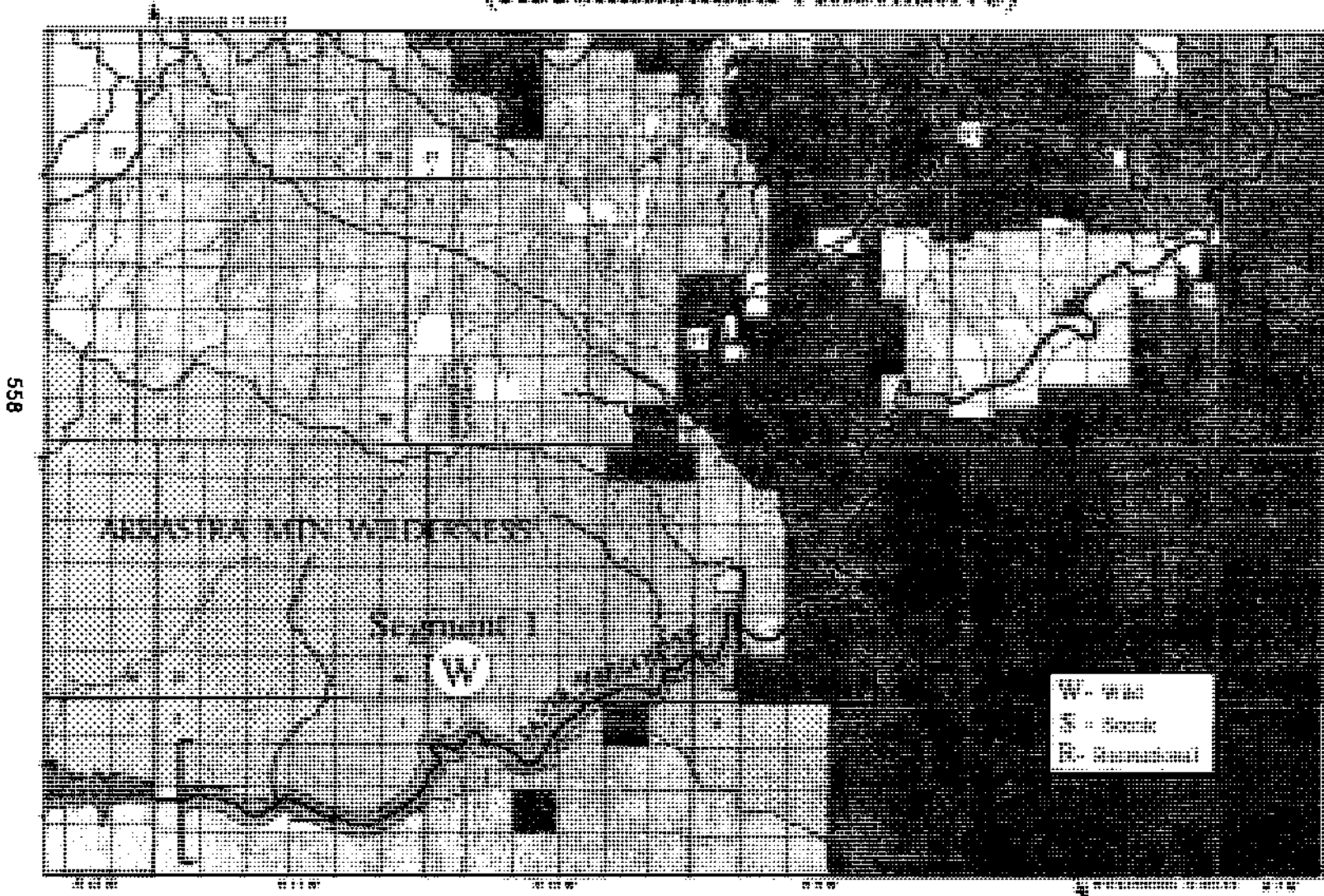
Ongoing management actions

Ongoing management actions in the Santa Maria River area would continue regardless of wild and scenic river designation. The following are selected management actions from the Kingman Resource Management Plan and the Three Rivers Riparian Area of Critical Environmental Concern Plan.

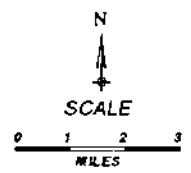
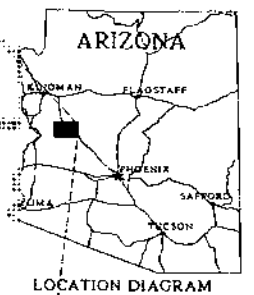
- New mineral entry would be prohibited in the wilderness in segment 1. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- Mineral development on the non-wilderness and non-riparian portion of segment 1 would require an approved plan of operations for activities above the level of casual use.
- The riparian zone would be recommended for withdrawal from locatable mineral entry under the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- No surface occupancy stipulations would be required for leasable minerals in the riparian area of the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- Mineral material disposals would be prohibited in the riparian area under the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- Efforts would be made to acquire 14,496 acres of private and 3,655 acres of state land and close them to mineral entry.
- Efforts would be made to acquire 610 acres of private land in the study area on a willing seller-willing buyer basis or by exchange.
- Motorized travel in the wilderness portion of segment 1 is prohibited.
- Camping, hiking, and off-highway vehicle use within 1/4-mile of bald eagle nests during breeding season would be prohibited.
- Road development within 1/2-mile of a bald eagle nest would be prohibited.
- Removal of native vegetation is prohibited within the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- A systematic program of salt cedar removal from primary drainage channels would be implemented.
- Livestock grazing would be monitored to identify conflicts with the outstandingly remarkable scenic and fish and wildlife habitat values.
- As indicated by monitoring, new water sources would be developed or grazing restricted in the river area to protect the outstandingly remarkable values.

SANTA MARIA RIVER

(Recommended Alternative)



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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA

October 1994

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines the entire 21 mile length of segment 1 to be suitable and recommends designation with a Wild classification, and determines all of the 17.8 mile segment 2 to be suitable and recommends designation with a Scenic classification (7,000 BLM acres total).

Much of segment 1 is in the Arrastra Mountain Wilderness Area. Management of that portion would comply with the standards of the Wilderness Act.

Wild and Scenic management actions

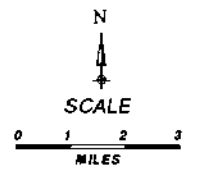
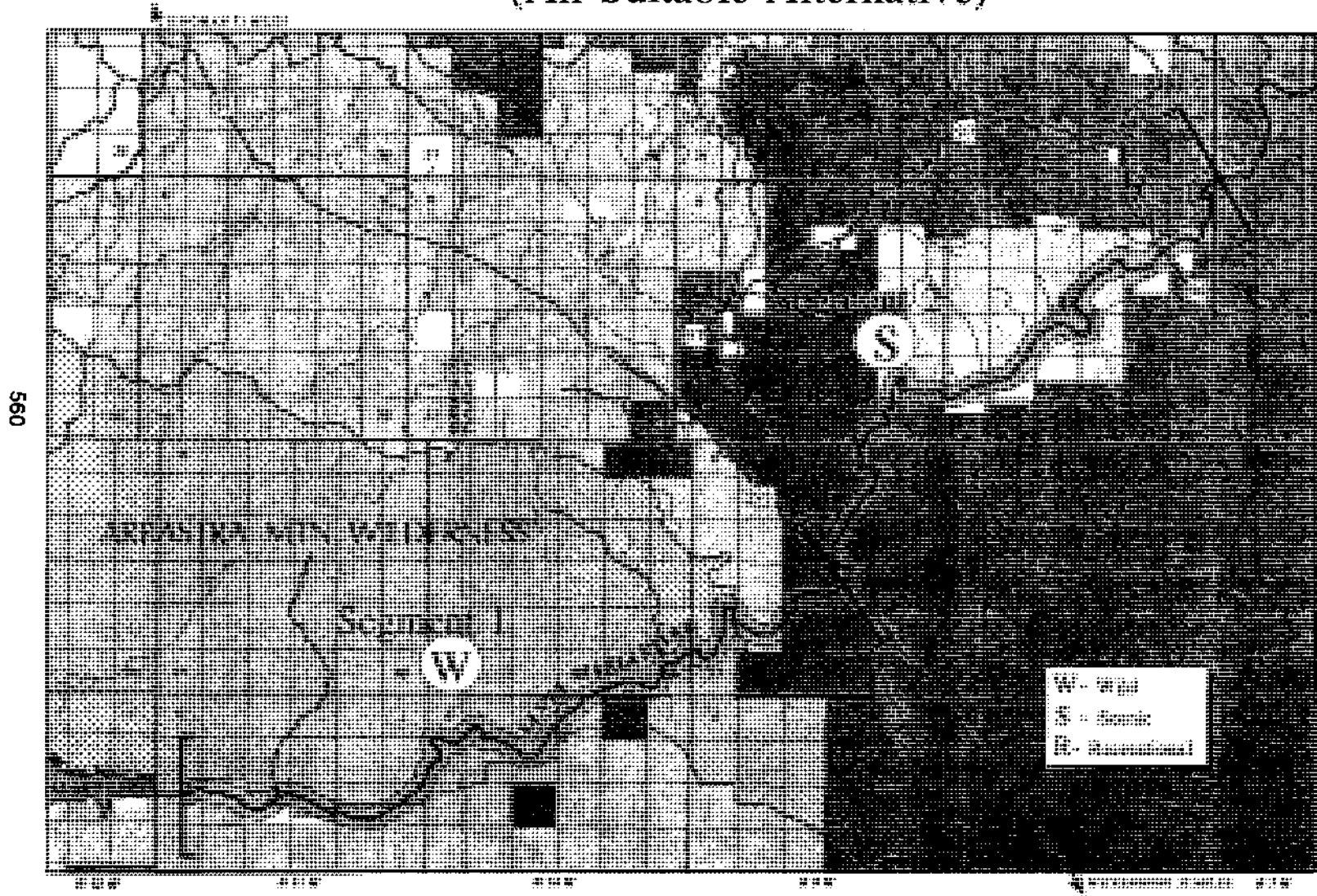
Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur on the public lands in the Santa Maria River study area Wild and Scenic segments. When wild and scenic river management actions overlap ongoing management actions, the more stringent would be applied.

- In the Wild segment new mining claims and mineral leases would be prohibited. In the Scenic segment mining claims and mineral leases would be allowed.
- Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- New mining claims would be restricted to patents on the mineral estate.
- Water quality would be maintained or improved.
- New hydroelectric power facilities would be prohibited.

- Construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited except where such developments would not have a direct and adverse effect on the river and its immediate environment.
- New flood control dams, levees, or other works would be prohibited.
- All water supply dams and major diversions would be prohibited.
- Construction of new roads or trails for motorized travel would be prohibited in the Wild segment.
- Motorized use would be restricted in the Wild segment. Exceptions could be for search and rescue and other emergency situations. Motorized travel would be permitted in the Scenic segment.
- Campgrounds, interpretive centers, or administrative headquarters in the Wild segment river corridor would be prohibited. In the Scenic segment moderate-sized campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged in Wild river areas but public use and access could be regulated.
- Wood cutting would not be permitted in the Wild segment except when needed to clear trails, for visitor safety or to control fire.
- Livestock grazing use would be restricted to current levels.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.

SANTA MARIA RIVER

(All Suitable Alternative)



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA

October 1994

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable applicable values.

Ongoing management actions

Ongoing management actions in the Santa Maria River study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Kingman Resource Management Plan and the Three Rivers Riparian Area of Critical Environmental Concern Plan.

- New mineral entry would be prohibited in the wilderness in segment 1. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- Mining claims would be restricted to patents on the mineral estate.
- Mineral development on the non-wilderness and non-riparian portion of segment 1 would require an approved plan of operations for activities above the level of casual use.
- The riparian zone would be recommended for withdrawal from locatable mineral entry under the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- No surface occupancy stipulations would be required for leasable minerals in the riparian area of the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- Mineral material disposals would be prohibited on public lands in the riparian area under the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- Efforts would be made to acquire 14,496 acres of private and 3,655 acres of state land and close them to mineral entry.
- Efforts would be made to acquire 610 acres of private land in the river study area on a willing seller-willing buyer basis or by exchange.
- Motorized travel in the wilderness portion of segment 1 is prohibited.
- Camping, hiking, and off-highway vehicle use within 1/4-mile of bald eagle nests during breeding season would be prohibited.
- Road development within 1/2-mile of a bald eagle nest would be prohibited.
- Removal of native vegetation is prohibited in the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- A systematic program of salt cedar removal from primary drainage channels would be implemented.
- Livestock grazing would be monitored to identify conflicts with the outstandingly remarkable scenic and fish and wildlife habitat values.
- As indicated by monitoring, new water sources would be developed or grazing restricted in the river area to protect the outstandingly remarkable values.

D. NO ACTION/NOT SUITABLE

The no action alternative determines the Santa Maria river study area to be nonsuitable and does not recommend designation.

Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Wild and Scenic management actions

The no action alternative recommends nondesignation for the entire Santa Maria River

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

study area. Implementation of the no action alternative would not involve wild and scenic river management actions.

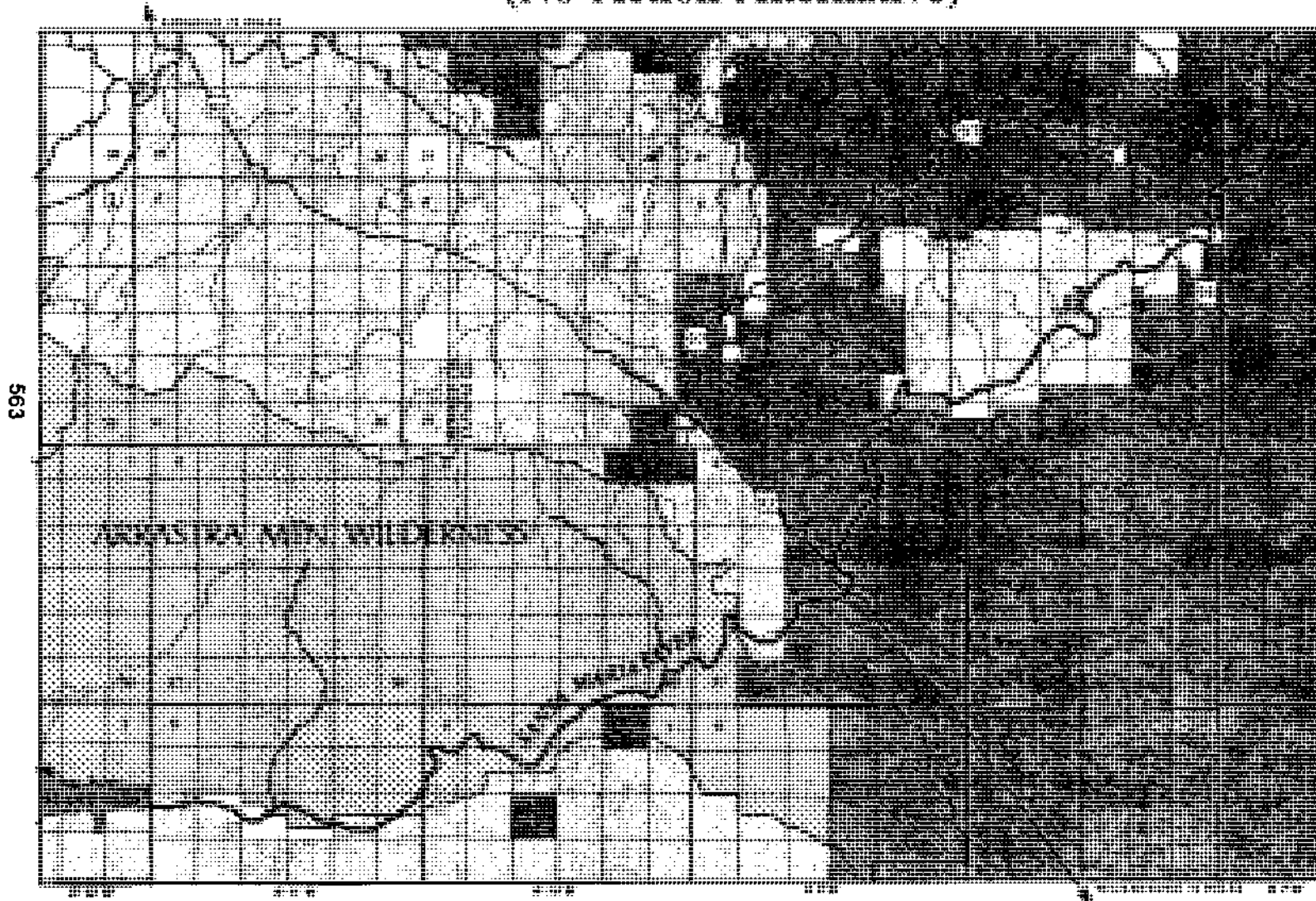
Ongoing management actions

Ongoing management actions would occur regardless of wild and scenic river designation. The ongoing management actions in the Santa María River study area listed below are summaries of selected provisions in the Kingman Resource Management Plan and the Three Rivers Riparian Area of Critical Environmental Concern Plan.

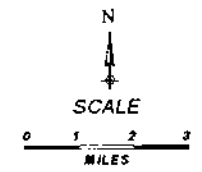
- New mineral entry would be prohibited in the wilderness in segment 1. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- Mining claims would be restricted to patents on the mineral estate.
- Mineral development on the non-wilderness and non-riparian portion of segment 1 would be require an approved plan of operation for activities above the level of casual use.
- The riparian zone would be recommended for withdrawal from locatable mineral entry under the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- No surface occupancy stipulations would be required for leasable minerals in the riparian area of the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- Mineral material disposals would be prohibited on public lands in the riparian area under the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- Efforts would be made to acquire 14,496 acres of private and 3,655 acres of state land and close them to mineral entry.
- Efforts would be made to acquire 610 acres of private land in the river study area on a willing seller-willing buyer basis or by exchange.
- Motorized travel in the wilderness portion of segment 1 is prohibited.
- Camping, hiking, and off-highway vehicle use within 1/4-mile of bald eagle nests during breeding season would be prohibited.
- Road development within 1/2-mile of a bald eagle nest would be prohibited.
- Removal of native vegetation is prohibited in the Three Rivers Riparian Area of Critical Environmental Concern Plan.
- A systematic program of salt cedar removal from primary drainage channels would be implemented.
- Livestock grazing would be monitored to identify conflicts with the outstandingly remarkable scenic and fish and wildlife habitat values.
- As indicated by monitoring, new water sources would be developed or grazing restricted in the river area to protect the outstandingly remarkable values.

SANTA MARIA RIVER

(No Action Alternative)



LOCATION DIAGRAM



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PHOENIX DISTRICT
KINGMAN RESOURCE AREA

October 1994

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E. ALTERNATIVES CONSIDERED BUT REJECTED

An alternative suggested by the Arizona Rivers Coalition proposed recommendation of much larger portion of the Santa Maria River for designation as Wild.

The proposal included the Bureau of Land Management administered Santa Maria River study area and associated state and National Forest land for a total of 80.5 miles. The proposal recommended designation of the entire area as Wild.

This proposal was considered but rejected because the Bureau of Land Management has no authority to recommend designation for areas it does not administer and because it required management actions on river areas well removed from Bureau of Land Management administered lands.

Another alternative was suggested that created segments that did not include any private lands. This alternative was considered and rejected because wild and scenic designation does not affect private lands.

Also, the all suitable alternative provides for the acquisition of private lands by the Bureau of Land Management on a willing-seller/willing-buyer basis. The recommended alternative and the all suitable alternative include the acquisition of 610 acres of private lands by the Bureau of Land Management on a willing-seller/willing-buyer basis.

An alternative was suggested that would exclude lands with high mineral potential from designation. This alternative was considered and rejected because the recommended alternative effectively addresses the mineral potential issue.

**TABLE SM-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative	All suitable	No action/not suitable
Outstandingly Remarkable Scenic Values	Receives legislative protection. No adverse impacts	Receives legislative protection. No adverse impacts	No legislative protection. No direct adverse impact
Outstandingly Remarkable Fish and Wildlife Habitat	Segment 1: No adverse impacts (receives legislative protection.) Segment 2: No legislative protection; No direct adverse impact	Receives legislative protection. No adverse impacts	No legislative protection. No direct adverse impact
Mineral Development	Adverse impacts	Adverse impacts	No adverse impact

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources along the Santa Maria River that could be affected by the implementation of the alternatives to recommend the river area for inclusion in the Wild and Scenic Rivers System. Further information is contained in the Kingman District Resource Management Plan and the Santa Maria Wild and Scenic suitability determination report.

A. OUTSTANDINGLY REMARKABLE VALUES

The river is free-flowing and has outstandingly remarkable scenic values and outstandingly remarkable fish and wildlife habitat values.

Segment 1 contains outstandingly remarkable scenic qualities. The narrow river gorge with numerous deep side canyons and escarpments provide a striking contrast to the surrounding mountains. The perennial presence of water and the riparian vegetation create a dramatic green belt that enhances the overall scenic quality of the area.

Segments 1 and 2 contain outstandingly remarkable fish and wildlife habitat values. Segment 1 contains an important desert riparian ecosystem. The segment provides important habitat for birds, fish, mammals, reptiles, and amphibians.

The riparian area provides wintering and breeding habitat for bald eagles, and is thought to harbor breeding peregrine falcons (Falco peregrinus anatum). This particular area could significantly contribute to the recolonization of the Colorado River by bald eagles (Haliaeetus leucocephalus).

Segment 2 also contains an important desert riparian ecosystem. The segment provides important habitat for birds, fish, mammals, reptiles, and amphibians. The Santa Maria River study area possesses a rare gallery forest and mesquite bosques.

As part of the Alamo Lake project, all lands up to the spillway crest elevation of 1,235 ft have been withdrawn from the Public Domain and are managed by the U.S. Army Corps of Engineers. Management authority for fish and wildlife purposes on all project lands has been delegated to the Arizona Game and Fish Department.

B. MINERALS

Copper, lead, gold, silver, and uranium have been mined in the Santa Maria River study area. Mineral exploration and development has been centered in two areas. One of these, about 1.5 miles south of the river, involved uranium deposits. Mining occurred at the Anderson mine, which ceased operations in the 1970s.

The other area is west of U.S. 93 in the Crosby (Eureka) Mining District. Activities in this area focus on the development of gold lode and placer deposits. There are 118 active lode and placer claims along the Santa Maria River. Exploration and development work is on-going at the Big Stick Mine, on State trust lands.

Sand and gravel material pits exist on private lands in Segment 2, north of the river. These pits have been used by the Arizona Department of Transportation and Cyprus-Bagdad since the mid-1970's. Although not currently active, they could be reactivated.

New mineral entry is prohibited in the 4,270 acres of segment 1 of the Santa Maria River study area located in the Arrastra Mountain Wilderness Area.

Mineral entry in the riparian zone is prohibited by the Three Rivers Riparian Area of Critical Environmental Concern Plan. Mineral disposals are prohibited in the riparian zone. Mineral leasing with no surface occupancy stipulations can occur in the riparian zone in accordance

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

with the Three Rivers Riparian Area of Critical Environmental Concern Plan.

C. LANDS

There are no utility corridors identified in the Kingman Resource Management Plan that cross the study area. Rights-of-ways exist for U.S. Highway 93 and State Highway 96. A county road runs parallel to the river southwest from State Highway 96. There are numerous private access roads in segment 2. Segment 1 has a few minor roads on state land.

There is an existing 345 KV transmission line that crosses the Santa Maria River study area just north of U.S. Highway 93.

There are approximately 2,430 acres of private land in the study area.

D. RECREATION

Recreation opportunities in the Santa Maria River study area are considered to be moderate. Hunting, off-highway vehicle travel, hiking and backpacking are the dominant uses.

There are no recreational facilities in the study area and none are planned.

E. WILDLIFE

Segment 1 is an important desert riparian ecosystem. The segment provides important habitat for birds, fish, mammals, reptiles, and amphibians. The riparian area provides wintering and breeding habitat for bald eagles, and possibly breeding peregrine falcons.

Segment 2 is an important desert riparian ecosystem. The segment provides important habitat for birds, fish, mammals, reptiles, and amphibians. The riparian area provides wintering habitat for bald eagles. This particular area could significantly contribute to the recolonization of the Colorado River by bald eagles.

The U.S. Fish and Wildlife Service has data that indicates that the river is habitat for the southwestern willow flycatcher (Empidonax traillii extimus), proposed for listing as endangered.

Candidate category 2 species that may occur in the study area are the spotted bat (Euderma maculatum), the California leaf-nosed bat (Macrotus californicus), the Hualapai southern pocket gopher (Thomomys umbrinus hualpaiensis), Yavapai Arizona pocket mouse (Perognathus amplus amplus), ferruginous hawk (Buteo regalis - wintering only), loggerhead shrike (Lanius ludovicianus), Sonoran desert tortoise (Gopherus agassizii), chuckwalla (Sauromalus obesus obesus), the Arizona toad (Bufo microscaphus microscaphus), rosy boas (Lichanura trivirgata), lowland leopard frog (Rana yavapaiensis), Sonora sucker (Catostomus insignis), desert sucker (Catostomus clarki), and roundtail chub (Gila robusta).

Nesting peregrine falcons have been documented in the Arrastra Mountain Wilderness according to the Arizona Game and Fish Department.

F. VEGETATION

A paloverde-saguaro (Cercidium floridum - Cereus giganteus) community dominates the areas adjacent to the Santa Maria floodplain. Cottonwood-willow (Populus Fremontii - Salix sp.) and mesquite (Prosopis sp.) bosque riparian communities exist along the river. No special status plants are known to exist in the Santa Maria River study area.

G. CULTURAL RESOURCES

Prehistoric artifact scatters and rockshelter sites have been recorded along the Santa Maria River. Many of these sites may represent seasonal base camps. People were attracted by riparian resources of the area. These were upland and Colorado River Patayan peoples.

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Archaeological surveys indicate that the riparian resources along the Santa Maria River attracted prehistoric and historic settlers. Numerous sites recorded along the river include seasonal base camps, rockshelters, and resource processing areas attributed to the Patayan tradition. These sites typically consist of rock roasting pits, food grinding areas, and thousands of diverse types of artifacts. Historic sites along the river include ranches and an associated cemetery dating to the 1890s.

H. WATER RESOURCES

The Santa Maria watershed is part of the Bill Williams River Basin which is not currently under a general water rights adjudication by the State of Arizona.

Numerous water rights for small stockponds, wells and springs located on tributary drainages to the Santa Maria have been filed by the Bureau of Land Management. These filings are for livestock, wildlife, wild horses and burros, recreation and mining uses on public lands.

The Bureau of Land Management acquired water rights in the watershed in recent land exchanges with the State of Arizona. One of these is a permit for in-place watering of livestock and wildlife along the entire reach of the river flowing through public lands.

A federal reserved water right was granted to the portion of the river in the Arrastra Mountain Wilderness Area by the Arizona Desert Wilderness Act of 1990. Quantification of this right would be determined through an instream flow assessment of wilderness values and notification was given to the state.

The relationship between existing consumption and existing flows is unknown.

A potential water-related concern exists with the proximity of the Alamo Lake and Alamo Dam to the southern portion of the Arrastra Mountain Wilderness Area. While there are no plans to

do so, there is a potential for the level of Alamo Lake to be raised. Were this to occur inundation of the Santa Maria River in the Arrastra Mountain Wilderness Area could impede backcountry travel use and impair or destroy the river's rare gallery forest and mesquite bosques.

The designation of the Arrastra Mountain Wilderness Area does not affect decisions on the water levels at the Alamo Dam.

I. LIVESTOCK GRAZING

The Santa Maria flows through five livestock grazing allotments. All are classed as perennial-ephemeral.

Segment 1 flows through four allotments: Tres Alamos ((#5021, deferred rest for the river pasture), Santa Maria Ranch (#5046; 27,574 federal acres, 2,880 AUMs; winter use for four months, spring and summer non-use along the river), Santa Maria Community (#3074; 59,427 federal acres, 2,337 AUMs; yearlong river use, although a proposed allotment management plan would provide for four months of winter use along the river with eight months nonuse along the river), and the Palmerita Ranch (#3063; 39,656 federal acres, 924 AUMs; livestock use of the river area yearlong. This is under consideration for a change to limit use of the riparian areas to a four-month grazing period).

These allotments cover 142,434 acres of public land and are authorized for a total of 7,641 AUMs.

Segment 2 flows through the Gibson Allotment (#0103), a 33,383 acre perennial allotment where the Bureau of Land Management authorizes the permittee to graze 1,202 animal unit months (AUMs) on a yearlong basis in accordance with the Gibson Allotment Management Plan. No new fences or improvements are planned.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Santa Maria River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The life of the project and long term impacts is 20 years. Short-term impacts are those occurring in five years of implementation.
4. Direct effects are caused by the action and occur at the same time and place. Indirect effects are caused by the action but occur later in time and are farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated Wild and Scenic River.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine.

Large mining operations would be those involving more than five acres and subject to approval of a plan of operation.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

Outstandingly Remarkable Values

Scenic quality and fish and wildlife habitat have been identified as outstandingly remarkable values in the Santa Maria River study area. The recommended alternative/part suitable alternative determines as suitable 17.4 miles of segment 1 (4,760 BLM public land acres) and recommends the study area for designation with

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a Wild classification. The outstandingly remarkable values would receive long-term legislative protection under the Wild and Scenic Rivers Act in addition to the protection provided by the Arrastra Mountain Wilderness Area.

The remaining 21.2 miles of the Santa Maria River study area are determined nonsuitable (3.4 miles of segment 1 and 17.8 miles of segment 2). The outstandingly remarkable scenic and fish and wildlife habitat values would not receive protection under the Wild and Scenic River Act. They would continue to receive protection from the Three Rivers Riparian Area of Critical Environmental Concern Plan.

Impacts on Outstandingly Remarkable Scenic Values

Segment 1 contains outstandingly remarkable scenic qualities. The narrow river gorge with numerous deep side canyons and escarpments provides a striking contrast to the surrounding mountains. The perennial presence of water and the riparian vegetation create a dramatic green belt that enhances the overall scenic quality of the area.

Implementation of the recommended alternative would involve certain wild and scenic river management actions. Future construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited. New flood control dams and levees also would be prohibited. These actions would preserve the outstandingly remarkable scenic values from impairment by any water-related activity.

Wild and scenic river management would require that water quality be maintained or improved. The Bureau of Land Management would develop an appropriate management plan to accomplish this. This action would protect the outstandingly remarkable scenic values.

New mining claims and mineral leases would be prohibited in the Wild area outside wilderness. This would protect the outstandingly remarkable scenic values from impairment due to minerals operations.

Constructing new roads or trails for motorized travel in the Wild segment outside wilderness would be prohibited. Motorized use would be prohibited. Campgrounds would be prohibited. And, while recreation use would be encouraged in the Wild segment public use and access could be regulated. These actions would protect the outstandingly remarkable scenic values from impairment by recreational overuse.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, efforts would be made to acquire 610 acres of private land in the study area on a willing seller-willing buyer basis or by exchange. This would increase the amount of land under federal administration and protect outstandingly remarkable scenic values from impairment by private development.

Future activities authorized outside of the wilderness area and the area of critical environmental concern such as mining or rights-of-ways could reduce the scenic quality of the area.

• Conclusion

The outstandingly remarkable scenic values would have long-term legislative protection from the Wild and Scenic Rivers Act. There would be no adverse impact on scenic values from the implementation of the recommended alternative.

Impacts on Outstandingly Remarkable Fish and Wildlife Values

Segment 1 contains outstandingly remarkable fish and wildlife habitat values. It is an important desert riparian ecosystem and provides important habitat for birds, fish,

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mammals, reptiles, and amphibians. The riparian area provides wintering and breeding habitat for bald eagles, and is thought to harbor breeding peregrine falcons.

Implementation of the recommended alternative would involve certain wild and scenic river management actions. Future construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited. New flood control dams and levees

also would be prohibited. These actions would preserve the outstandingly remarkable fish and wildlife values from impairment by any water-related activity.

Wild and scenic river management would require that water quality be maintained or improved. The Bureau of Land Management would develop an appropriate management plan to accomplish this. This action would protect the outstandingly remarkable fish and wildlife values.

New mining claims and mineral leases would be prohibited in the Wild area outside wilderness. This would protect the outstandingly remarkable fish and wildlife values from impairment due to minerals operations.

Constructing new roads or trails for motorized travel in the Wild segment outside wilderness would be prohibited. Motorized use would be prohibited. Campgrounds would be prohibited, and, while recreation use would be encouraged in the Wild segment public use and access could be regulated. These actions would protect the outstandingly remarkable fish and wildlife values from impairment by recreational overuse.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, camping and hiking within 1/4-mile of bald eagle nests during

breeding season would be prohibited. Removal of native vegetation would be prohibited. A systematic program of salt cedar removal from primary drainage channels would be implemented. In addition, any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service.

The U.S. Army Corps of Engineers manages Alamo Dam and regulates the water level in Alamo Lake. If the spillway height of Alamo Dam were to be significantly raised the result could be an inundation of the fish and wildlife habitat in the Santa Maria River study area.

Implementation of the recommended alternative would provide protection for the outstandingly remarkable fish and wildlife habitat values from the potential threat caused by raising the water level at Alamo Dam and the resulting inundation of the southern portion of the river study area and Arrastra Mountain Wilderness Area.

Livestock grazing occurring in the wilderness area could adversely impact riparian resources, and indirectly affect fish and wildlife habitat and populations. However, livestock grazing would be monitored and, if needed, mitigation in the form of fencing and exclosures would be initiated.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act. There would be no adverse impacts to outstandingly remarkable fish and wildlife habitat under implementation of the recommended alternative.

Impact on Mineral Development

Copper, lead, gold, silver, and uranium have been mined in the Santa Maria River study area. Mineral exploration and development has centered in two areas. One of these, about 1.5

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miles south of the river, involved uranium deposits. Mining occurred at the Anderson mine, which ceased operations in the 1970s.

The other area is west of U.S. 93 in the Crosby (Eureka) Mining District. Activities in this area focus on the development of gold lode and placer deposits. There are 118 active lode and placer claims along the Santa Maria River. Exploration and development work is on-going at the Big Stick Mine, on State trust lands.

The mineral potential is regarded as low to low-to-moderate by the U.S. Geological Survey and Bureau of Mines.

Without wild and scenic river designation two small mines employing 10 people are projected to be developed.

New mining claims and mineral leases would be prohibited in the Wild area (570 acres) outside wilderness under the recommended alternative.

Mineral entry is prohibited in the 4,270 acres of segment 1 of the Santa Maria River study area located in the Arrastra Mountain Wilderness Area. Valid existing claims would be recognized and existing mining activity would be allowed to continue.

• Conclusion

Closure of the area in the Wild segment outside wilderness would have a minor adverse impact on mineral development during the life of the project. The development potential of two small mines employing 10 people would be foregone.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other

actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Santa Maria River study area.

Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Three Rivers Riparian Area of Critical Environmental Concern and the Arrastra Mountain Wilderness Area.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative

Under the recommended alternative mineral entry would not be allowed due to its location in the Arrastra Mountain Wilderness Area.

Wilderness Areas, though created by Congress, are subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts due to the restrictions on activities from the Arrastra Mountains Wilderness Area and the Three Rivers Riparian Area of Critical Environmental Concern Management Plan.

Short-term uses of the environment versus long-term productivity

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Under the recommended alternative all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE (ELIGIBILITY) ALTERNATIVE

Outstandingly Remarkable Values

Scenic quality and fish and wildlife habitat have been identified as outstandingly remarkable values in the Santa Maria River study area.

The all suitable alternative recommends two segments (7,000 BLM acres) of the Santa Maria river study area for designation. segment 1 would be Wild; segment 2 would be Scenic. The outstandingly remarkable values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Segment 1 has outstandingly remarkable scenic and fish and wildlife habitat values. Segment 2 has outstandingly remarkable fish and wildlife habitat values.

Impacts on Outstandingly Remarkable Scenic Values

Segment 1 contains outstandingly remarkable scenic qualities. The narrow river gorge with numerous deep side canyons and escarpments provides a striking contrast to the surrounding mountains. The perennial presence of water and the riparian vegetation create a dramatic green belt that enhances the overall scenic quality of the area.

Implementation of the all suitable alternative would involve certain wild and scenic river management actions. Future construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited. New flood control dams and levees also would be prohibited. These actions would preserve the outstandingly remarkable scenic

values from impairment by any water-related activity.

Wild and scenic river management would require that water quality be maintained or improved. The Bureau of Land Management would develop an appropriate management plan to accomplish this. This action would protect the outstandingly remarkable scenic values.

New mining claims and mineral leases would be prohibited in the Wild area outside wilderness. This would protect the outstandingly remarkable scenic values from impairment due to minerals operations.

Constructing new roads or trails for motorized travel in the Wild segment outside wilderness would be prohibited. Motorized use would be prohibited. Campgrounds would be prohibited, and, while recreation use would be encouraged in the Wild segment public use and access could be regulated. These actions would protect the outstandingly remarkable scenic values from impairment by recreational overuse.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, efforts would be made to acquire 610 acres of private land in the river study area on a willing seller-willing buyer basis or by exchange. This would increase the amount of land under federal administration and protect outstandingly remarkable scenic values from impairment by private development.

Future activities authorized outside of the wilderness area and the area of critical environmental concern such as mining or rights-of-ways could reduce the scenic quality of the area.

• Conclusion

The outstandingly remarkable scenic values would have long-term legislative protection from the wild and Scenic Rivers Act.

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There would be no adverse impact on scenic values from the implementation of the all suitable alternative.

Impacts on Outstandingly Remarkable Fish and Wildlife Values

Segment 1 and segment 2 contain outstandingly remarkable fish and wildlife habitat values. They represent an important desert riparian ecosystem and provide important habitat for birds, fish, mammals, reptiles, and amphibians. The riparian areas provide wintering and breeding habitat for bald eagles, and possibly breeding peregrine falcons.

Implementation of the all suitable alternative would involve certain wild and scenic river management actions. Future construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited in both segments. New flood control dams and levees also would be prohibited. These actions would preserve the outstandingly remarkable fish and wildlife values from impairment by any water-related activity.

Wild and scenic river management would require that water quality be maintained or improved. The Bureau of Land Management would develop an appropriate management plan to accomplish this. This action would protect the outstandingly remarkable fish and wildlife values.

New mining claims and mineral leases would be prohibited in the Wild area of segment 1 outside wilderness. This would protect the outstandingly remarkable fish and wildlife values from impairment due to minerals operations. In segment 2, where mineral leasing would not be closed by wild and scenic river provisions, new mining claims would be restricted to the mineral patent. This would benefit the outstandingly remarkable fish and wildlife values by ensuring that after the terms of the lease have been fulfilled, the surface would continue to be

managed by the federal government.

Constructing new roads or trails for motorized travel in the Wild segment outside wilderness would be prohibited. Motorized use would be prohibited. Campgrounds would be prohibited, and, while recreation use would be encouraged in the Wild segment public use and access could be regulated. These actions would protect the outstandingly remarkable fish and wildlife values from impairment by recreational overuse.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, camping and hiking within 1/4-mile of bald eagle nests during breeding season would be prohibited. Removal of native vegetation would be prohibited. A systematic program of salt cedar removal from primary drainage channels would be implemented. In addition, any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service.

The U.S. Army Corps of Engineers manages Alamo Dam and regulates the water level in Alamo Lake. If the spillway height of Alamo Dam were to be significantly raised the result could be an inundation of the fish and wildlife habitat in the Santa Maria River study area.

Implementation of the all suitable alternative would provide protection for the outstandingly remarkable fish and wildlife habitat values from the potential threat caused by raising the water level at Alamo Dam and the resulting inundation of the southern portion of the river study area and Arrastra Mountain Wilderness Area.

Livestock grazing occurring in the wilderness area could adversely impact riparian resources, and indirectly affect fish and wildlife habitat and populations. However, livestock grazing would be monitored and, if needed, mitigation in the

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form of fencing and enclosures would be initiated.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

There would be no adverse impacts to outstandingly remarkable fish and wildlife habitat under implementation of the all suitable alternative.

Impact on Mineral Development

Copper, lead, gold, silver, and uranium have been mined in the Santa Maria River study area. Mineral exploration and development has centered in two areas. One of these, about 1.5 miles south of the river, involved uranium deposits. Mining occurred at the Anderson mine, which ceased operations in the 1970s.

The other area is west of U.S. 93 in the Crosby (Eureka) Mining District. Activities in this area focus on the development of gold lode and placer deposits. There are 118 active lode and placer claims along the Santa Maria River. Exploration and development work is on-going at the Big Stick Mine, on state trust lands.

The mineral potential is regarded as low to low-to-moderate by the U.S. Geological Survey and Bureau of Mines.

New mining claims and mineral leases would be prohibited in the Wild area (570 acres) outside wilderness under the all suitable alternative. However, mineral entry is not closed outside the riparian zone in segment 2. In accordance with the minerals scenario, two small mines employing 10 people are projected to be developed in this area. Wild and scenic river management actions would restrict patents to the mineral estate, but except for difficulties small operations may encounter with financing,

this would not have an adverse impact.

The ongoing management activities described in Chapter 2 would have little impact on mining outside the riparian zone.

Mineral entry is prohibited in the 4,270 acres of segment 1 of the Santa Maria River study area located in the Arrastra Mountain Wilderness Area. Valid existing claims would be recognized and existing mining activity would be allowed to continue.

There would be no impact on the sand and gravel material pits on private lands in Segment 2.

• Conclusion

Closure of the area in the Wild segment outside wilderness would have a minor adverse impact on mineral development. The development potential of two small mines employing 10 people would be foregone. In the nonriparian area of segment 2 two small mines could initiate operation.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

The no action alternative determines the entire Santa Maria River study area to be nonsuitable and does not recommend designation.

Outstandingly Remarkable Values

Scenic quality and fish and wildlife habitat have been identified as outstandingly remarkable values in the Santa Maria River study area.

Wild and Scenic River management actions.

Under the no action alternative the Santa Maria Wild and Scenic River Study segments would not be recommended for designation and the outstandingly remarkable values would not receive special legislative protection under the Wild and Scenic Rivers Act.

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Ongoing management actions

In most of segment 1 the outstandingly remarkable scenic and fish and wildlife habitat values would be subject to the effects of actions allowable under the management of the Arrastra Mountain Wilderness Area. In the remainder the outstandingly remarkable scenic and fish and wildlife habitat values would be subject to the effects of actions under the Three Rivers Riparian Area of Critical Environmental Concern Plan.

Impacts on Outstandingly Remarkable Scenic Values

Segment 1 contains outstandingly remarkable scenic qualities. The narrow river gorge with numerous deep side canyons and escarpments provide a striking contrast to the surrounding mountains. The perennial presence of water and the riparian vegetation create a dramatic green belt that enhances the overall scenic quality of the area.

The scenic values contained in the wilderness area are protected.

Mining in the riparian area would be prohibited. Mining activities, above the level of casual use, occurring outside the riparian area in the Three Rivers Riparian Area of Critical Environmental Concern would not be authorized until a plan of operation that protected resource values was approved.

Future activities authorized outside of the wilderness area and the area of critical environmental concern such as mining or rights-of-ways could reduce the scenic quality of the area.

• Conclusion

There would be no direct adverse impact on outstandingly remarkable scenic values from implementing the no action alternative.

The outstandingly remarkable values would not have long-term legislative protection.

Impacts on outstandingly remarkable Fish and Wildlife Habitat Values

Segments 1 and 2 contain outstandingly remarkable fish and wildlife habitat values. Segment 1 contains an important desert riparian ecosystem and provides important habitat for birds, fish, mammals, reptiles, and amphibians.

The riparian area provides wintering and breeding habitat for bald eagles, and is thought to harbor breeding peregrine falcons. Segment 2 also contains an important desert riparian ecosystem. The segment provides important habitat for birds, fish, mammals, reptiles, and amphibians. The Santa Maria River study area possesses a rare gallery forest and mesquite bosques.

The outstandingly remarkable fish and wildlife habitat resource would be protected under the no action alternative in several ways. Camping, hiking, and off-highway vehicle use within 1/4-mile of bald eagle nests during breeding season would be prohibited. Road development within 1/2-mile of a bald eagle nest would be prohibited. Removal of native vegetation would be prohibited. A systematic program of salt cedar removal from primary drainage channels would be implemented. In addition, any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service.

Other protective actions include the withdrawal of the wilderness area from mineral entry, prohibiting mineral entry in the riparian area, and requiring an approved plan of operation for all mineral activities, above the level of casual use, in the area of critical environmental concern. Also, efforts would be made to acquire 14,496 acres of private and 3,655 acres of state land and close them to mineral entry in accordance with to the Three Rivers Riparian Area of Critical Environmental Concern Plan

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Livestock grazing occurring in the wilderness area, the area of critical environmental concern, and the remainder of the river study area could adversely impact riparian resources, and indirectly affect fish and wildlife habitat and populations. However, livestock grazing would be monitored and, if needed, mitigation in the form of fencing and exclosures would be initiated.

• Conclusion

Protection of the outstandingly remarkable fish and wildlife habitat values would not be ensured by the Wild and Scenic Rivers Act. However, there would be no direct adverse impacts to outstandingly remarkable fish and wildlife habitat under implementation of the no action alternative.

Impact on Mineral Development

Copper, lead, gold, silver, and uranium have been mined in the Santa Maria River study area. Mineral exploration and development has been centered in two areas. One of these, about 1.5 miles south of the river, involved uranium deposits. Mining occurred at the Anderson mine, which ceased operations in the 1970s.

The other area is west of U.S. 93 in the Crosby (Eureka) Mining District. Activities in this area focus on the development of gold lode and placer deposits. There are 118 active lode and placer claims along the Santa Maria River. Exploration and development work is on-going at the Big Stick Mine, on State trust lands.

Mineral entry is prohibited in the 4,270 acres of segment 1 of the Santa Maria River study area located in the Arrastra Mountain Wilderness Area. Valid existing claims would be recognized and existing mining activity would be allowed to continue.

Locatable mineral entry in the riparian zone is prohibited by the Three Rivers Riparian Area of Critical Environmental Concern Plan. Mineral material disposals are prohibited in the riparian zone. Mineral leasing with no surface occupancy stipulations can occur in the riparian zone in accordance with the Three Rivers Riparian Area of Critical Environmental Concern Plan.

Mineral entry and activities can occur in the Santa Maria River study area outside the riparian zone and wilderness area following Bureau of Land Management approval of a plan of operation.

Up to four small mines outside the riparian zone are projected to start operation during the life of the project. These mines would make use of 20 acres of public land and employ up to 20 people.

Although an effort would be made to acquire 14,496 acres of private and 3,655 acres of state land and close them to mineral entry a minerals scenario providing for the development of two small mines in the next 20-years is reasonable. These mines would involve less than nine acres. Four miles of access roads would serve the mines. They would provide employment for up to ten people.

• Conclusion

There would be no adverse impacts to minerals development from the implementation of the no action alternative. Up to four small mines would be started in the nonriparian zone during the life of the project.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Santa Maria Wild and Scenic River Suitability Environmental Impact Document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Statement began in January, 1993.

B. ELIGIBILITY

A determination was made in the Kingman Resource Management Plan (1993) that the Santa Maria River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Kingman Resource Management Plan is on file at the Kingman Resource Area Office, Kingman, Arizona, and the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Santa Maria River study area were held in Bagdad April 5, 1993, Kingman April 6, 1993, and Phoenix April 14, 1993. Ninety-five to 100 people attended the Bagdad meeting, 17 to 20 the Kingman meetings, and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land

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Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

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C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

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J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

SANTA MARIA RIVER WILD AND SCENIC RIVER STUDY AREA

REFERENCES

Arizona Rivers Coalition

- 1991 Arizona Rivers: Lifeblood of the Desert: A Citizens' Proposal for the Protection of Rivers in Arizona, Phoenix

Public Laws

- 1976 P.L. 94-579, Federal Land Policy and Management Act of 1976.
1973 P.L. 100-478, Endangered Species Act of 1973, as amended.
1968 P.L. 90-542, Wild and Scenic Rivers Act of 1968.
1969 P.L. 91-190, National Environmental Policy Act of 1969.

U.S. Bureau of Land Management

- 1993 Kingman Resource Area Resource Management Plan, Kingman, Arizona.
1993 Santa Maria Wild and Scenic River Suitability Assessment, Kingman, Arizona. Kingman, Arizona.
1992 Potential Wild and Scenic Rivers, Phoenix, Arizona.
1983 Lower Gila North Habitat Management Plan, Phoenix, Arizona (with Region III, Arizona Game and Fish Department).
1979 Alamo Interim Herd Management Area Plan, 1979 Update, Phoenix, Arizona.
ND Gibson Allotment Management Plan, Kingman Resource Area, Kingman, Arizona.

Bureau of Land Management, 1994

**SWAMP SPRINGS CANYON
WILD AND SCENIC RIVER STUDY AREA**

**TUCSON RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



SWAMP SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

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SWAMP SPRINGS CANYON WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Swamp Springs Canyon were identified in the Safford District Resource Management Plan (1993) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability for recommending these portions of Swamp Springs Canyon to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

Swamp Springs Canyon Wild and Scenic River Study Area is located in Graham County in southeastern Arizona about thirty miles north of

Benson. The segment under consideration is extremely remote. It is approximately 2.5 miles long with approximately 90 percent on public land. The segment is entirely within the Redfield Canyon Wilderness Area. This segment was considered eligible for wild and scenic river designation in the Safford District Resource Management Plan because it is free-flowing and possesses outstandingly remarkable fish and wildlife values. In the eligibility evaluation it was tentatively classified as Wild.

The shoreline of the segment is primitive and undeveloped. There are no roads or other developments within the corridor. The state owns a short reach of the canyon bottom at the confluence with Redfield Canyon. Swamp Springs Canyon is a perennial stream within the Basin and Range Physiographic Province in the Sonoran biotic community. The elevation ranges from 3,650 feet at the confluence with Redfield Canyon to about 4,000 feet at the upstream end of the segment.

**TABLE SS-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

SWAMP SPRINGS CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	2.0	.5	0	2.5
PERCENT	80	20.0	0	100
TOTAL ACRES	640	160	0	800
PERCENT	80	20	0	100
SUBSURFACE MINERALS ACRES	640	160	0	800

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

C. INTERRELATIONSHIPS

1. The Bureau of Land Management

The Swamp Springs Canyon study area is located entirely within the 6,600 acre Redfield Canyon Wilderness designated by Congress in the Arizona Desert Wilderness Act of 1990. The Bureau of Land Management will manage this wilderness area under the provisions of the Muleshoe Ecosystem Management Plan. The

study area will continue to be managed under this plan whether or not is designated as a wild and scenic river.

Prior to designation as wilderness this area was managed as part of the Muleshoe Ranch under a cooperative management agreement, signed in December 1988, by the U. S. Forest Service, the Bureau of Land Management and The Nature Conservancy.

**TABLE SS-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE SWAMP SPRINGS
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

SWAMP SPRINGS WILD AND SCENIC RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Redfield Canyon Wilderness Area	640	100

2. Federal Agencies

The U. S. Forest Service manages a small percentage of the upper Swamp Springs watershed. The Coronado National Forest (Galiuro Mountains) is contiguous to the Redfield Canyon Wilderness and manages the Galiuro Wilderness.

The ranch is a mix of private land (The Nature Conservancy) and public land administered by the Bureau of Land Management and U.S. Forest Service and managed under the directives of a cooperative management agreement signed by the federal agencies and The Nature Conservancy in 1988.

3. State

Arizona owns the section of land that contains the confluence of Redfield Canyon and Swamp Springs Canyon. Approximately 160 acres of this land is within the study area.

D. SCOPING

Scoping meetings specifically highlighting the Hot Springs Canyon study area were held in 1993 in Winkelman April 12, with nearly a dozen people attending, in Tucson April 13 attended by 35-40 people, and in Benson April 15 where about 10 attendees signed the register.

4. Private

The Nature Conservancy owns and manages approximately 5,000 acres of land on the Muleshoe ranch southeast of this study area. Swamp Springs Canyon is located on the Muleshoe Ranch, an historic cattle ranch, which is now partially owned and operated as a nature preserve by the Nature Conservancy.

The issues concern the impacts of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

Uses or resources raised as issues specifically for this study area include the following.

Scoping Issues

- Impacts on outstandingly remarkable fish and wildlife habitat values (native fish, native raptors)
- Impacts on riparian vegetation communities
- Impacts on recreation use, (hunting, fishing, off-highway vehicle)
- Impacts on livestock grazing
- Impacts on minerals development
- Impacts on water rights
- Impacts on the property base
- Impacts to federal agencies (cost of management)
- Need to make the evaluation and designation process more open to the public
- Impacts of dual wilderness area and wild and scenic river designation
- Impacts on tourism
- Impact on property values
- Impacts on access to public lands
- Designation of rivers and streams with ephemeral and intermittent flow regimes

Issues considered but not analyzed

- Impacts on minerals development.

Swamp Springs Canyon is entirely within the Redfield Canyon Wilderness Area. This wilderness area was withdrawn from future mineral entry and mineral leasing by provisions in the Wilderness Act of 1964 that were adopted by the Arizona Desert Wilderness Act of 1990. There are currently no mining claims or leases of record in the study area. The study area is not within any organized mining district and there has been no historic mineral production.

A U.S. Geological Survey and U.S. Bureau of Mines minerals survey and evaluation of the southern Galluro Mountains in 1987 states that there are no identified mineral resources in the area nor are their indications of undiscovered resources (Summary of Mineral and Mineral Resource Potential of the Galluro Addition Wilderness Study Area (AZ-040-081), Graham

County, Arizona, William J. Keith, U.S. Geological Survey and Terry J. Kreidler, U.S. Bureau of Mines). Another study Mineral Land Assessment MLA-43-88 conducted in 1988 by Russel A. Schreiner of the U.S. Department of Interior Bureau of Mines addresses the Muleshoe area and confirms the lack of mineral resources within the study area. The area was determined to have a low mineral potential for locatable, leasable, and saleable minerals.

This issue will not be discussed further.

- Impacts on water rights.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

A federal reserved water right was acquired for Swamp Springs Canyon by the Arizona Desert Wilderness Act of 1990. The Bureau of Land Management will submit notification of this federal reserved right with the State of Arizona.

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

The Bureau of Land Management applied for an instream flow water right of seven cubic feet per second (#33-94370) for Swamp Springs Canyon on December 1, 1988 through the State of Arizona.

Valid existing water rights are not threatened by wild and scenic river designation. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights.

This issue will not be discussed further.

- Impacts on the property base.

Acquisition of nonfederal land in the study area is limited to the 160 acres of state land encompassing the confluence of Swamp Springs Canyon and Redfield Canyon. The acquisition of state land will have no impact on the private property base.

The acquisition process would only move forward and be completed on a willing seller-willing buyer basis.

This issue base will not be discussed further.

- Impacts to federal agencies (cost of management).

The Wild and Scenic Rivers Act requires that all eligible rivers be evaluated for suitability for inclusion in the National Wild and Scenic Rivers System.

This issue will not be considered further.

- Need to make the evaluation and designation process more open to the public.

The Bureau of Land Management has rigorously followed appropriate requirements in its scoping and public review processes for wild and scenic river eligibility evaluation and suitability determination.

This issue will not be discussed further.

- Impacts of dual wilderness area and wild and scenic river designation.

There are no environmental impacts from dual management designation since the management actions would always comply with the most stringent requirements. For example, in a segment designated as a Wild river which also is under wilderness management, the use of motorized vehicles would be prohibited due to the wilderness designation regardless of guidance for wild and scenic rivers.

This issue will not be discussed further.

- Impacts on tourism.

The level of visitor use is low and increased recognition of the area through association with The Nature Conservancy's Muleshoe Preserve and federal designation as a wilderness area is expected to result in a slow to moderate increase in the estimated 1,000 to 1,200 annual visitors.

This issue will not be discussed further.

- Impact on property values.

No private property exists within the study area. Other private property in the area should not be affected by designation.

The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation easement on a willing seller-willing buyer basis.

There are no impacts expected on private property values or uses from implementation of the alternatives.

This issue will not be discussed further.

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

- Impacts on access to public lands.

Access to the study area and adjacent public lands will not be affected. Access in the area is provided by Jackson Cabin Road. Designation will not affect the current use of this road. Off-highway vehicle use is prohibited in the wilderness area.

This issue will not be discussed further.

- Designation of rivers and streams with ephemeral and intermittent flow regimes.

According to Bureau of Land Management Wild and Scenic Rivers Manual (MS 8351), a river need not be "boatable or floatable" in order to be eligible. For purposes of eligibility determination, the volume of flow is sufficient if it is enough to maintain the outstandingly remarkable values identified within the segment.

Rivers with intermittent flows exist within the National Wild and Scenic Rivers System, and rivers representative of desert ecosystems having outstanding ecological or other values, should be considered.

This issue will not be considered further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the study area under each alternative.

The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends. The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. In this case the study area will be managed under the provisions of the Muleshoe Ecosystem Management Plan that was initiated in 1993.

These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to management under existing plans.

The following alternatives are addressed:

Recommended alternative (no action)
All suitable alternative

B. Recommended alternative

The recommended alternative determines the Swamp Springs Canyon river study area to be nonsuitable and does not recommend the area for inclusion in the National Wild and Scenic Rivers System.

Implementation of the recommended alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions. In the case of Swamp Springs Canyon the river study area is contained entirely within the Redfield Canyon Wilderness that was

designated by the Arizona Desert Wilderness Act of 1990.

Wild and Scenic River management actions

The recommended alternative determines the entire Swamp Springs Canyon study area to be nonsuitable. No wild and scenic rivers management actions would be involved in implementing the recommended alternative.

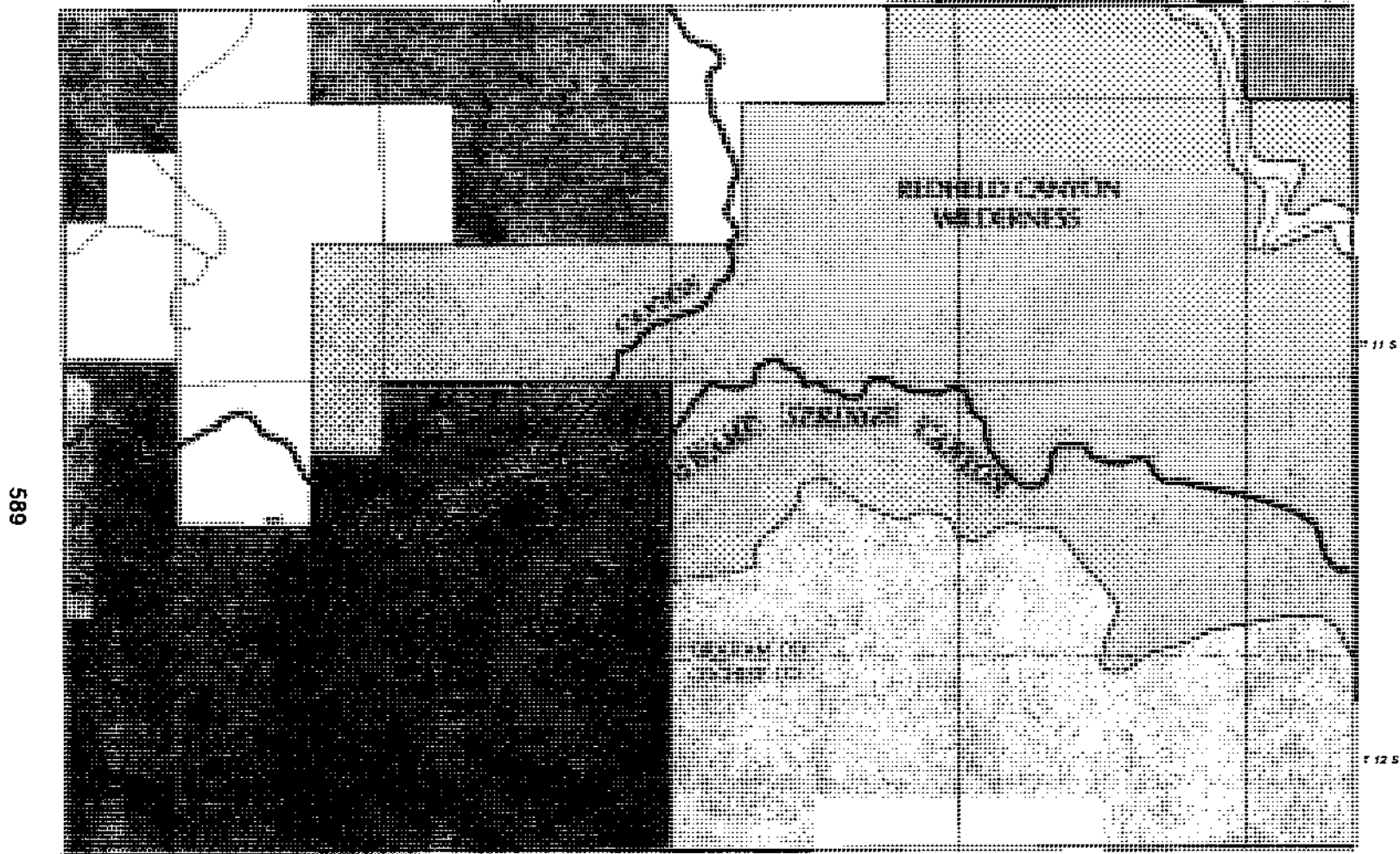
Ongoing management actions

The list of ongoing management actions below summarizes Wilderness Act management provisions for the Redfield Canyon Wilderness and management actions in the Safford District Resource Management Plan (1993). A wilderness management plan for the Redfield Canyon Wilderness is scheduled to be completed in 1995.

- The study area was closed to mineral entry and mineral leasing by the Arizona Desert Wilderness Act of 1990.
- The study area will be managed to allow recreation use while maintaining wilderness values.
- The study area will be managed for dispersed recreation. This includes hiking, hunting picnicking, bird watching and camping.
- The study area is closed to off-highway Vehicles.
- The study area is included in a Class I Visual Resource Management zone (the Redfield Wilderness).
- The study area will be managed to maintain and restore wildlife populations and habitats consistent with the Arizona Desert Wilderness Act.

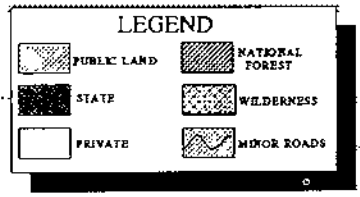
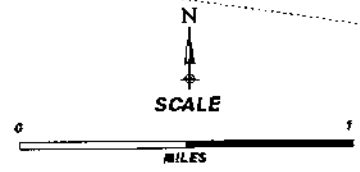
SWAMP SPRINGS CANYON

(Recommended Alternative)



UNITED STATES
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SAFFORD DISTRICT
GILA RESOURCE AREA

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SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

- Establish the Gila chub as a priority species and manage habitat to maintain or increase population levels.
- Plant species and communities will be allowed to respond to natural forces with minimal human intervention.
- Projects to improve wildlife habitat may be allowed.
- An Instream flow water right application has been filed with the Arizona Department of Water Resources for seven cubic feet per second of stream flow.
- A federal reserved water right was acquired for Swamp Springs Canyon in the Arizona Desert Wilderness Act.
- Activities that impact water quality would be prohibited, curtailed or managed to protect the water resources.
- Livestock use of this study area will be determined in the Muleshoe Ecosystem Management Plan/Redfield Canyon Wilderness Management Plan. Livestock grazing will be terminated, excluded from the stream segment or managed in a manner that protects the riparian and other resource values identified in the Muleshoe Ecosystem Management Plan and/or values identified in the Wilderness Act.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines that the 640-acre Swamp Springs Canyon river study is suitable and recommends designation with Wild classification.

Wild and Scenic River management actions

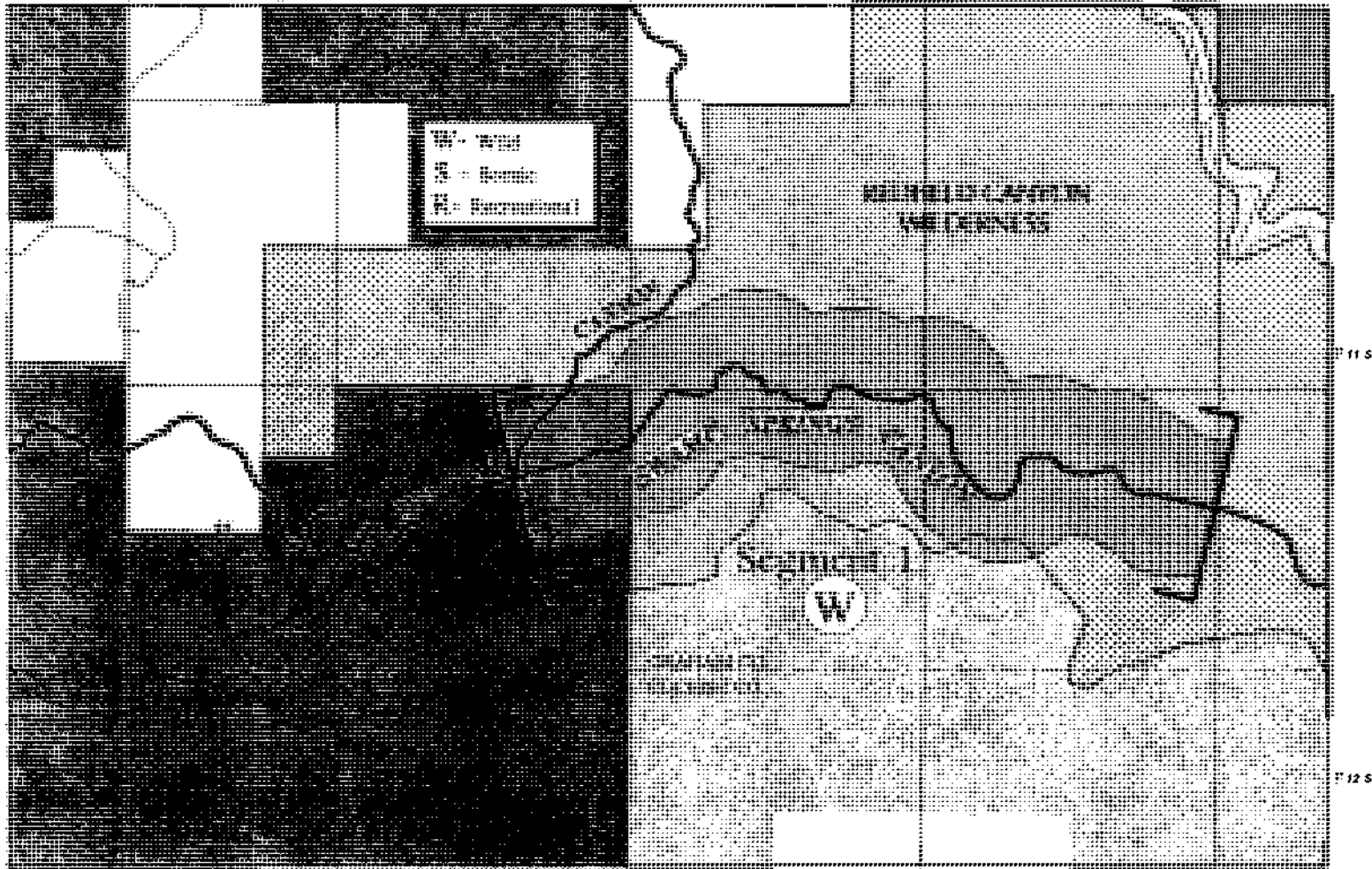
Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic Rivers Manual (MS 8351, August 19, 1992) the following would occur in the implementation of the all suitable

alternative recommending Swamp Springs Canyon as a Wild river. Where wild and scenic river management actions overlap ongoing management actions, the more stringent would apply.

- New mining claims and mineral leases would be prohibited. Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- Subject to valid existing rights, mining claims could be patented only as to the mineral estate and not the surface estate.
- Water quality would be maintained or improved.
- Hydroelectric power facilities would be prohibited.
- No new flood control dams, levees, or other works would be permitted.
- Construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited.
- All water supply dams and major diversions would be prohibited.
- Construction of new roads or trails for motorized travel would be prohibited.
- Normally, motorized use would be restricted in a Wild river area. Exceptions could be for search and rescue and other emergency situations.
- Campgrounds, interpretive centers, or administrative headquarters within the river corridor would be prohibited. Simple comfort and convenience facilities could be permitted.
- Recreation use would be encouraged in Wild river areas but public use and access could be regulated.

SWAMP SPRINGS CANYON

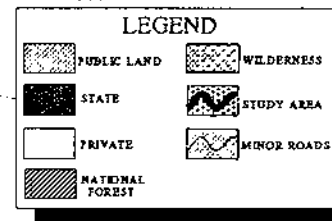
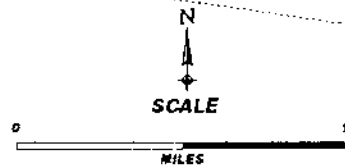
(All Suitable Alternative)



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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

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SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

- Woodcutting would not be permitted except when needed to clear trails, for visitor safety or to control fire.
- Livestock grazing use would be restricted to current levels.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.
- Instream flows would be quantified and protected. An instream flow assessment would be made in order to secure instream flow protection for outstandingly remarkable values.

Ongoing management actions

Ongoing management actions in the Swamp Springs study area would continue regardless of wild and scenic river designation.

The ongoing management actions listed below summarize Wilderness Act management provisions for the Redfield Canyon Wilderness and management actions in the Safford District Resource Management Plan (1993). A wilderness management plan for the Redfield Canyon Wilderness is scheduled to be completed in 1995.

- The study area was closed to mineral entry and mineral leasing by the Arizona Desert Wilderness Act of 1990.
- The study area will be managed to allow recreation use while maintaining wilderness values.
- The study area will be managed for dispersed recreation. This includes hiking, hunting, picnicking, bird watching and camping.
- The study area is closed to off-highway vehicles.

The study area is included in a Class I Visual Resource Management zone (the Redfield Wilderness).

- The study area will be managed to maintain and restore wildlife populations and habitats consistent with the Arizona Desert Wilderness Act.
 - Establish the Gila chub as a priority species and manage habitat to maintain or increase population levels.
 - Plant species and communities will be allowed to respond to natural forces with minimal human intervention.
 - Projects to improve wildlife habitat may be allowed.
 - An instream flow water right application has been filed with the Arizona Department of Water Resources for seven cubic feet per second of stream flow.
 - A federal reserved water right was acquired for Swamp Springs Canyon in the Arizona Desert Wilderness Act.
 - Activities that impact water quality would be prohibited, curtailed or managed to protect the water resources.
 - Livestock use of this study area will be determined in the Muleshoe Ecosystem Management Plan/Redfield Canyon Wilderness Management Plan. Livestock grazing will be terminated, excluded from the stream segment, or managed in a manner that protects the riparian and other resource values identified in the Muleshoe Ecosystem Management Plan and/or values identified in the Wilderness Act.
- ### D. ALTERNATIVES CONSIDERED BUT REJECTED
- The Arizona Rivers Coalition recommended that a 17-mile segment of Swamp Springs Canyon passing through the Coronado National Forest

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

and Redfield Canyon be recommended for a Wild designation. The Bureau of Land Management considered this recommended

alternative but rejected it as inappropriate for inclusion in this document because it includes lands managed by the U.S. Forest Service.

**TABLE SS-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative	All suitable
Impacts on Outstandingly Remarkable Fish Population and Habitat Values	No adverse impacts	No adverse impacts; long-term protection under the Wild and Scenic Rivers Act
Impacts on Recreation	Minor beneficial impact	Minor beneficial impact
Impacts on Livestock Grazing	Minor adverse impact	Minor adverse impact
Impacts on Riparian Vegetation	Beneficial impact	Beneficial impact
Impacts on Water Resources	Beneficial impact	Beneficial impact

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Swamp Springs Canyon study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Safford District Resource Management Plan and the Swamp Springs Canyon wild and scenic suitability assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Safford District Resource Management Plan identified two species of native fish and federal candidate or state threatened wildlife resources (yellow billed cuckoo and black hawk) as outstandingly remarkable in determining that the Swamp Springs Canyon is eligible for consideration as a wild and scenic river.

B. MINERAL POTENTIAL

Swamp Springs Canyon is entirely within the Redfield Canyon Wilderness Area. This wilderness area was withdrawn from future mineral entry by provisions in the Wilderness Act of 1964 that were adopted by the Arizona Desert Wilderness Act of 1990. There are no mining operations in or near Swamp Springs Canyon.

There are currently no mining claims or leases of record in the study area. The study area is not within any organized mining district and there has been no historic mineral production.

A U.S. Geological Survey and U.S. Bureau of Mines minerals survey and evaluation of the southern Galiuro Mountains in 1987 states that there are no identified mineral resources in the area nor are there indications of undiscovered resources (Summary of Mineral and Mineral Resource Potential of the Galiuro Addition Wilderness Study Area (AZ-040-081), Graham

County, Arizona, William J. Keith, U.S. Geological Survey and Terry J. Kreidler, U.S. Bureau of Mines). Another study, Mineral Land Assessment MLA-43-88 conducted in 1988 by Russel A. Schreiner of the U.S. Department of Interior Bureau of Mines, addresses the Muleshoe area and confirms the lack of mineral resources within the study area.

The area was determined to have a low mineral potential for locatable, leasable, and saleable minerals.

C. LANDS

Access to this area is by primitive dirt road and foot or horseback. The only road near this area is the very primitive and rough Jackson Cabin road that originates near Hooker Hot Springs and crosses the Swamp Springs Canyon stream channel about 3/4 of a mile upstream of the study area. The stream in this area is intermittent. An alternate access route is at Redington with a ten-mile drive on a primitive dirt road in the uplands north of Redfield Canyon.

D. RECREATION

Information provided by the Arizona Chapter of the Nature Conservancy show that, in the previous twelve months ending in June 1, 1993, 1675 visitors utilized the Muleshoe area. The Nature Conservancy overnight facilities at Hooker Hot Springs were used by 825 visitors, and an additional 850 people signed in at the Jackson Cabin Road entrance for day or back country use. Since the sign-in procedures are voluntary and unsupervised these numbers can be considered very conservative.

An estimated use of 1,700 to 1,800 visitors annually to this area is reasonable. This represents an increase of 300 to 500 visitors over a similar time period in 1991-1992. Actual visitor use of Swamp Springs Canyon is unknown but is believed to be extremely light.

SWAMP SPRINGS CANYON WILD AND SCENIC RIVERS STUDY AREA

The Canyon is very remote and difficult to access. The majority of visitors coming to the Muleshoe area probably utilize Hot Springs Canyon, Jackson Cabin or Redfield Canyon.

Hunting for deer, javalina and quail are popular activities in and around the Muleshoe area. The Nature Conservancy prohibits hunting on their private land in this area. Public and state lands are open for hunting during the various hunting seasons. No fishing opportunities exist in the canyon due to the species of native fish inhabiting the stream. Actual use of Swamp Springs Canyon is unknown but is considered to be very light.

No off-highway vehicle use of Swamp Springs Canyon has been reported since the area was acquired by the Bureau of Land Management in 1986. The study area was closed to off-highway vehicle use by the Arizona Desert Wilderness Act of 1990.

Low levels of use, primarily limited to dispersed recreation in a relatively primitive and remote setting, and a lack of recreation related problems has made visitor management/protection a low priority. Consequently, few visitor management activities are currently taking place.

E. WILDLIFE

The Safford District Resource Management Plan identified the presence of two species of native fish, yellow billed cuckoo, and black hawks as outstandingly remarkable resources in Swamp Springs Canyon. Additional Bureau of Land Management and U.S. Fish and Wildlife Service inventories indicate that many species of wildlife depend on the variety of habitat types and aquatic resources generated by the perennial stream in Swamp Springs Canyon.

Twelve species of endangered, threatened and/or candidate fish or wildlife species have been documented to occur within Swamp Springs Canyon.

Swamp Springs Canyon provides outstandingly remarkable habitat values for endangered and candidate wildlife species. The river, riparian vegetation and upland areas provides habitat used by three federally endangered species (bald eagle (Haliaeetus leucocephalus), peregrine falcon (Falco peregrinus), and the lesser long-nosed bat (Leptonycteris curasoae verbaeunae) and 10 federal candidate species (California leaf-nosed bat (Macrotus californicus), Mexican long-tongued bat (Choeronycteris mexicana), Loggerhead shrike (Lanius ludovicianus), Apache northern goshawk (Accipiter gentilis apache), cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum), desert tortoise (sonoran population) (Gopherus agassizii), lowland leopard frog (Rana yavapaiensis), and Mexican garter snake (Thamnophis eques).

Steep shady canyons provide potential breeding and/or migratory habitat for sensitive avian riparian obligate species, including elegant trogon and Mexican spotted owl.

The perennial waters of Swamp Springs Canyon provide habitat for a variety of native fish species. Four native fish species, longfin dace (Agosia chrysogaster), Gila chub (Gila intermedia), Sonora sucker (Catostomus insignis) and the desert sucker (Pantosteus clarkii) represent one of the few remaining intact native fish communities in the state.

The study area is known to provide habitat for at least 11 state listed species.

Raptors such as the zone-tailed hawk (Buteo albonotatus), black hawk (Buteo anthracinus) and sharp shinned hawk (Accipiter striatus), nest in and feed on resources linked to surface water flow in this area.

Wildlife species such as mule deer, white-tailed deer, desert bighorn sheep, javalina, black bear, mountain lion, coati, numerous bird species as well as reptiles and amphibians have been found to utilize the riparian habitat in Swamp Springs Canyon.

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F. VEGETATION

Riparian vegetation includes mixed broadleaf and mesquite communities. Species include alder, net-leaf hackberry, Goodding willow, Arizona walnut, Arizona ash, Fremont cottonwood, Arizona sycamore, one-seeded juniper, Mexican blue oak and velvet mesquite. Upland communities are primarily desert grasslands. Saguaro and several species of agave are common.

G. WATER RESOURCES

Bureau of Land Management inventories indicate that this stream segment is perennial and constitutes one hydrologic unit within the study area. Upstream of this segment the stream becomes intermittent and the resources of the area reflect this change. No impoundments exist on this watershed. The flow regimes in Swamp Springs Canyon remain natural and unaltered. The Bureau of Land Management has rarely measured stream flow in this canyon due to the remote location and difficult access.

A shallow groundwater aquifer found beneath the stream supports surface flow.

Water quality in Swamp Springs Canyon has been excellent the few times it has been monitored. The remote location and difficult access make scheduled sampling difficult.

The Arizona Desert Wilderness Act of 1990 states: "With respect to each wilderness area designated by this title, Congress hereby reserves a quantity of water sufficient to fulfill the purposes of this title." The priority date of this water right is the date of enactment of the Act.

The Bureau of Land Management and The Nature Conservancy currently are pursuing the acquisition of instream flow water rights for Swamp Springs Canyon. The application filed with Arizona Department of Water Resources in 1988 identified beneficial uses of recreation, wildlife and fish. The application requested seven cubic feet per second of stream flow on a year round basis.

H. LIVESTOCK GRAZING

Livestock use of this segment ended when The Nature Conservancy acquired the Muleshoe Ranch in 1982. Active grazing leases exist on the state lands and U.S. Forest Service lands in the upper watershed. No grazing is allowed in the Galluro Wilderness.

Recently a local rancher applied for the unused grazing privileges on the Muleshoe allotment. The Bureau of Land Management denied the application and the decision has been challenged and won by the rancher. This decision has been appealed to the Interior Board of Land Appeals by Bureau of Land Management and The Nature Conservancy.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Swamp Springs Canyon river study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated Wild and Scenic River. In this case the study area will be managed under the provisions of the Muleshoe Ecosystem Management Plan.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative would determine that the Swamp Springs Canyon study area is not suitable and would not recommend the study area for designation.

Impacts on the outstandingly remarkable values

The Safford District Resource Management Plan identified two species of native fish and federal candidate and state threatened (yellow billed cuckoo and black hawk) wildlife resources as outstandingly remarkable in determining that Swamp Springs Canyon is eligible for consideration as a wild and scenic river.

Under the recommended alternative the Swamp Springs Canyon study segment would not be recommended for designation. The outstandingly remarkable values identified in the eligibility evaluation would not receive long-term

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legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable fish population and habitat values

The perennial waters of Swamp Springs Canyon provide habitat for a variety of native fish species. Four native fish species, longfin dace, Gila chub, Sonora sucker, and the desert sucker represent one of the few remaining intact native fish communities in the state.

Activities that directly impact aquatic habitat or the hydrologic and vegetation resources that interact to create and maintain it would have adverse impacts on native fish populations.

Under the recommended alternative the management of this area would be guided by the Safford District Resource Management Plan and the Muleshoe Ecosystem Management Plan.

Activities that can impact aquatic habitat are either prohibited or curtailed. Livestock grazing will either continue to be excluded from the area or managed to prevent impacts to aquatic resources.

The use of the area by motorized off-highway vehicles and mining exploration were terminated by mineral withdrawals under the Wilderness Act.

Increased visitor use of the area may have minor negative impacts on the aquatic environment.

• Conclusion

Implementation of the recommended alternative would have no adverse impacts on the outstandingly remarkable fish population and habitat values. The outstandingly remarkable fish population and habitat values would not receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly remarkable wildlife population and habitat values

Wildlife such as big game mammals, a variety of raptors, numerous song bird species as well as reptiles and amphibians have been found to utilize the riparian habitat in Swamp Springs Canyon. Fourteen species of endangered, threatened and/or candidate wildlife species have been documented to occur within Swamp Springs Canyon. Notable among these species are Gila chub, Chiricahua leopard frog, zone-tailed hawk, peregrine falcon, yellow-billed cuckoo, northern beardless-tyrannulet, willow flycatcher, several bat species and bighorn sheep.

Steep shady canyons provide potential breeding and/or migratory habitat for sensitive avian riparian obligate species, including elegant trogon and Mexican spotted owl.

Under the recommended alternative the study area will be managed to maintain and restore wildlife populations and habitats consistent with the Arizona Desert Wilderness Act.

Activities that can impact wildlife habitat and populations are either prohibited or curtailed by the Wilderness Act.

Livestock grazing will either continue to be excluded from the area or managed to prevent impacts to wildlife habitat.

The use of the area by motorized of-highway vehicles was terminated by wilderness designation.

Potential mining exploration impacts were terminated by mineral withdrawals under the Wilderness Act.

Increased visitor use of the area may have minor negative impacts on wildlife habitat and increase the human disturbance factor for sensitive species.

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Continued use of the area for hunting may have low negative impacts for wildlife.

• Conclusion

Implementation of the recommended alternative would have no adverse impacts on the outstandingly remarkable wildlife population and habitat values.

The outstandingly remarkable fish population and habitat values would not receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on Recreation

Information provided by the Arizona Chapter of the Nature Conservancy show that, in the previous twelve months ending in June 1, 1993, 850 people signed in at the Jackson Cabin Road entrance to the Muleshoe area for day or back country use. Since the sign-in procedures are voluntary and unsupervised these numbers can be considered very conservative. An estimated use of 1,000 to 1,200 visitors per year to this area is reasonable.

Actual visitor use of Swamp Springs Canyon is unknown but is believed to be extremely light. The canyon is very remote and difficult to access.

The majority of visitors coming to the Muleshoe area probably utilize Hot Springs Canyon, Jackson Cabin or Redfield Canyon. The numbers of visitors using these areas is increasing.

Hunting for deer, javalina and quail are popular activities in and around the Muleshoe area. The Nature Conservancy prohibits hunting on their private land in this area. Public and state land are open for hunting during the various hunting seasons.

No fishing opportunities exist in the canyon due to the species of native fish inhabiting the stream. Actual use of Swamp Springs Canyon

study area is unknown but is considered to be very light.

No off-highway vehicle use of Swamp Springs Canyon study area has been reported since the area was acquired by the Bureau of Land Management in 1986. The study area was closed to off-highway vehicle use by the Arizona Desert Wilderness Act of 1990.

The study area will be managed to allow recreation use while maintaining wilderness values. Dispersed recreation in a primitive setting is characteristic of wilderness recreation opportunities.

• Conclusion

Under implementation of the recommended alternative, ongoing management actions would be followed. The recommended alternative would have minor beneficial impacts on recreation by providing management guidance and constraints as the number of visitors increase.

Impacts on Livestock Grazing

Livestock use of this segment ended when The Nature Conservancy acquired the Muleshoe Ranch in 1982. No livestock have been grazed on these lands since that time.

Livestock grazing, in wilderness areas, is permitted where it occurred prior to designation of the wilderness area.

Livestock use of this study area currently is in litigation. The actions required by the results of the litigation will be incorporated into the Muleshoe Ecosystem Management Plan/Redfield Canyon Wilderness Management Plan. Livestock use will either be terminated, excluded from the stream segment or managed in a manner that protects the Wild and Scenic River, wilderness, riparian and other resource values.

Grazing management under the implementation

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of the recommended alternative will comply with the results of the livestock grazing litigation. Protection of the riparian area would continue.

Total exclusion of the area from grazing would not have a substantive impact on grazing in the Muleshoe area.

- **Conclusion**

Under implementation of the recommended alternative, ongoing management actions would be followed. The recommended alternative will have minor adverse impacts on grazing.

Impacts on Riparian Vegetation

In the Swamp Springs Canyon study area, riparian vegetation includes mixed broadleaf and mesquite communities. Species include alder, net-leaf hackberry, Goodding willow, Arizona walnut, Arizona ash, Fremont cottonwood, Arizona sycamore, one-seeded juniper, Mexican blue oak and velvet mesquite. Upland communities are primarily desert grasslands. Saguaro and several species of agave are common.

Management of the area as wilderness will preclude impacts from some uses that have negative impacts on riparian vegetation. Livestock grazing will either continue to be excluded from the area or managed to prevent impacts to riparian vegetation. The use of the area by motorized off-highway vehicles was terminated by wilderness designation.

Potential mining exploration impacts were terminated by mineral withdrawals under the Wilderness Act.

Increased visitor use of the area may have minor negative impacts on riparian vegetation.

The recommended alternative is expected to have beneficial impacts on riparian vegetation by protecting the existing communities from uses causing negative impacts.

- **Conclusion**

Under the recommended alternative, ongoing management actions would be followed. This alternative would have positive impacts on riparian vegetation by protecting the existing communities from uses causing negative impacts. It is also expected to have minor beneficial impacts on upland vegetation.

Impacts on Water Resources

The flow regimes in Swamp Springs Canyon study area are natural and unaltered. A shallow groundwater aquifer beneath the stream supports surface flow. Water quality in Swamp Springs Canyon has been excellent the few times it has been monitored. The remote location and difficult access make scheduled sampling difficult.

Under the recommended alternative, management would protect the quantity and quality of the water. According to the Arizona Desert Wilderness Act and Safford District Resource Management Plan, any activities that impact water quality are either prohibited, curtailed or managed to protect the water resource.

The Arizona Desert Wilderness Act of 1990 granted Swamp Springs Canyon a federal reserved water right. The priority date of this water right is the date of enactment of the Act.

The Bureau of Land Management filed an application with the State of Arizona to acquire instream flow water rights for Swamp Springs Canyon in December, 1988. The application requests seven cubic feet per second for recreation, wildlife and fish.

- **Conclusion**

Under the recommended alternative, ongoing management actions would be followed. This alternative would have beneficial impacts on water resources by providing legal protection

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for the existing quantity of high quality water in the study area.

Cumulative impacts

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Swamp Springs Canyon study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Redfield Canyon Wilderness, Hot Springs-Swamp Springs Riparian Area of Critical Environmental Concern, and the Safford District Resource Management Plan (1992).

The cumulative impacts to uses and values associated with implementation of the recommended alternative would be negligible due to the regulations and management constraints on these areas.

Irreversible and irretrievable commitments of resources involved in the recommended alternative.

Mineral entry in the Redfield Canyon portion of the study area was withdrawn by the Arizona Wilderness Act of 1990. Mineral entry would remain open in the remainder of the area.

There are no irreversible or irretrievable commitments of resources.

Unavoidable adverse effects

Outstandingly remarkable values found in the area will not have legislative protection from the Wild and Scenic Rivers Act.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

Impacts on the outstandingly remarkable values

The Safford District Resource Management Plan identified two species of native fish and federal candidate and state threatened (yellow billed cuckoo and black hawk) wildlife resources as outstandingly remarkable in determining that Swamp Springs Canyon is eligible for consideration as a wild and scenic river. Under the all suitable alternative, the Swamp Springs Canyon study area would determine suitable and be recommended for a Wild designation. Its outstandingly remarkable values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Impacts on outstandingly Remarkable Fish Population and Habitat Values

The perennial waters of Swamp Springs Canyon provide habitat for a variety of native fish species.

Four native fish species, longfin dace, Gila chub, Sonora sucker, and the desert sucker represent one of the few remaining intact native fish communities in the state. Activities that directly impact aquatic habitat or the hydrologic and vegetation resources that interact to create and maintain it would have adverse impacts on

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native fish populations.

Wild and scenic river management actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway. All water supply dams and major diversions would be prohibited. These actions would protect the existing outstandingly remarkable fish population and habitat values by ensuring that no changes would occur.

The all suitable alternative would require the Bureau of Land Management to maintain or improve water quality. The Bureau of Land Management would develop and implement an action plan to satisfy the requirement and meet the goals of maintaining or improving water quality.

This management action also would protect the outstandingly remarkable fish populations and habitat values.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, management of this area would be guided by the Safford District Resource Management Plan with additional guidance from the Muleshoe Ecosystem Management Plan.

Activities such as off-highway vehicle use, mining, road construction, and excessive grazing that can impact aquatic habitat are either prohibited or curtailed. Livestock grazing will either continue to be excluded from the area or managed to prevent impacts to aquatic resources.

The use of the area by motorized off-highway vehicles was terminated by wilderness designation. Potential mining exploration impacts were terminated by mineral withdrawals under the Wilderness Act.

Increased visitor use of the area may have minor negative impacts on the aquatic

environment.

• Conclusion

The outstandingly remarkable fish population and habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

The all suitable alternative would have beneficial impacts on native fish by protecting the existing aquatic habitat from uses that could cause negative impacts.

Impacts on outstandingly Remarkable Wildlife Population and Habitat Values

Wildlife such as big game mammals, a variety of raptors, numerous song bird species as well as reptiles and amphibians have been found to utilize the riparian habitat in Swamp Springs Canyon.

Fourteen species of endangered, threatened and/or candidate wildlife species have been documented to occur within swamp Springs Canyon.

Notable among these species are Gila chub, Chiricahua leopard frog, zone-tailed hawk, peregrine falcon, yellow-billed cuckoo, northern beardless-tyrannulet, willow flycatcher, several bat species and bighorn sheep.

Steep shady canyons provide potential breeding and/or migratory habitat for sensitive avian riparian obligate species, including elegant trogon and Mexican spotted owl.

Wild and scenic river management actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway. All water supply dams and major diversions would be prohibited. These actions would protect the existing outstandingly remarkable wildlife population and habitat values by ensuring that no changes would occur.

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Implementation of the all suitable alternative would require the Bureau of Land Management to maintain or improve water quality. The Bureau of Land Management would develop and implement an action plan to satisfy the requirement and meet the goals of maintaining or improving water quality. This management action also would protect the outstandingly remarkable wildlife populations and habitat values.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, under the all suitable alternative, the study area will be managed to maintain and restore wildlife populations and habitats consistent with the Arizona Desert Wilderness Act.

Activities that can impact wildlife habitat and populations are either prohibited or curtailed. Livestock grazing will either continue to be excluded from the area or managed to prevent impacts to wildlife habitat. The use of the area by motorized off road vehicles was terminated by wilderness designation.

Potential mining exploration impacts were terminated by mineral withdrawals under the Wilderness Act.

Increased visitor use of the area may have minor negative impacts on wildlife habitat and increase the human disturbance factor for sensitive species. Continued use of the area for hunting may have low negative impacts for wildlife.

• Conclusion

The outstandingly remarkable wildlife population and habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

The all suitable alternative would have beneficial impacts on native wildlife by protecting the existing wildlife habitat from uses causing

negative impacts. Some minor negative impacts may occur as visitation increases.

Impacts on Recreation

Information provided by the Arizona Chapter of the Nature Conservancy show that 850 people signed in at the Jackson Cabin Road entrance to the Muleshoe area for day or back country use in the 12-months ending in June 1993. Since the sign-in procedures are voluntary and unsupervised these numbers can be considered very conservative. An estimated use of 1,000 to 1,200 visitors per year to this area is reasonable.

Actual visitor use of Swamp Springs Canyon is unknown, but is believed to be extremely light. The canyon is very remote and difficult to access.

The majority of visitors coming to the Muleshoe area probably utilize Hot Springs Canyon, Jackson Cabin or Redfield Canyon. The numbers of visitors using these areas is increasing.

Hunting for deer, javalina and quail are popular activities in and around the Muleshoe area. The Nature Conservancy prohibits hunting on their private land in this area. Public and state lands are open for hunting during the various hunting seasons.

No fishing opportunities exist in the canyon due to the species of native fish inhabiting the stream.

No off-highway vehicle use of Swamp Springs Canyon has been reported since the area was acquired by the Bureau of Land Management in 1986. The study area was closed to off-highway vehicle use by the Arizona Desert Wilderness Act of 1990.

The study area will be managed to allow recreation use while maintaining wilderness values.

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Dispersed recreation in a primitive setting is characteristic of wilderness recreation opportunities.

- **Conclusion**

Ongoing management actions that would occur under the implementation of the all suitable alternative would have minor beneficial impacts on recreation as the number of visitors increase.

Impacts on livestock grazing

Livestock use of this segment ended when The Nature Conservancy acquired the Muleshoe Ranch in 1982. No livestock have been grazed on these lands since that time.

Livestock grazing, in wilderness areas, is permitted where it occurred prior to designation of the wilderness area.

Livestock use of this study area currently is in litigation. The actions required by the results of the litigation will be incorporated into the Muleshoe Ecosystem Management Plan/Redfield Canyon Wilderness Management Plan.

Livestock use will either be terminated, excluded from the stream segment or managed in a manner that protects the wild and scenic river, wilderness, riparian and other resource values.

Grazing management under the implementation of the all suitable alternative would comply with the results of the livestock grazing litigation. Protection of the riparian area would continue.

Total exclusion of the area from grazing would not have a substantive impact on grazing in the Muleshoe area.

- **Conclusion**

Ongoing management actions that would occur under implementation of the all suitable alternative would have minor adverse impacts on grazing.

Impacts on Riparian Vegetation

In the Swamp Springs Canyon study area riparian vegetation includes mixed broadleaf and mesquite communities. Species include alder, net-leaf hackberry, Goodding willow, Arizona walnut, Arizona ash, Fremont cottonwood, Arizona sycamore, one-seeded juniper, Mexican blue oak and velvet mesquite.

Upland communities are primarily desert grasslands. Saguaro and several species of agave are common.

Management of the area as wilderness will preclude impacts from some uses that have negative impacts on riparian vegetation.

Livestock grazing will either continue to be excluded from the area or managed to prevent impacts to riparian vegetation.

The use of the area by motorized off-highway vehicles was terminated by wilderness designation.

Potential mining exploration impacts were terminated by mineral withdrawals under the wilderness act.

Increased visitor use of the area may have minor negative impacts on riparian vegetation.

- **Conclusion**

Ongoing management actions that would occur under implementation of the all suitable alternative would have beneficial impacts on riparian vegetation by protecting the existing communities from uses causing negative impacts. It is also expected to have minor beneficial impacts on upland vegetation.

Impacts on Water Resources

The flow regimes in Swamp Springs Canyon are natural and unaltered. A shallow groundwater aquifer beneath the stream supports surface flow.

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Water quality in Swamp Springs Canyon has been excellent the few times it has been monitored. The remote location and difficult access make scheduled sampling difficult.

Under the all suitable alternative management would protect the quantity and quality of the water.

According to the Arizona Desert Wilderness Act and Safford District Resource Management Plan, any activities that impact water quality are either prohibited, curtailed or managed to protect the water resource.

The Arizona Desert Wilderness Act of 1990 granted Swamp Springs Canyon a federal reserved water right. The priority date of this water right is the date of enactment of the Act.

The Bureau of Land Management filed an application with the State of Arizona to acquire instream flow water rights for Swamp Springs Canyon in December, 1988. The application requests seven cubic feet per second for recreation, wildlife and fish.

- Conclusion

Ongoing management actions that would occur under implementation of the all suitable alternative would have beneficial impacts on water resources by providing long-term legislative protection for the existing quantity of high quality water in the study area.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Swamp Springs study area environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that Swamp Springs was eligible for further wild and scenic river study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford Resource Management Plan is on file at the Gila Resource Area Office, Safford, Arizona, and the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Hot Springs Canyon study area were held in Winkelman April 12, with nearly a dozen people attending, in Tucson on April 13 attended by 35-40 people, and in Benson April 15 where about 10 signed the register.

Five interagency public informational meetings

for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and informal consultation meetings, and made

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personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shilwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermillion Resource Area.

B. Smith, Renewable Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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U.S. Geological Survey

1986 Metallic Mineral and Mineral-Fuel Resource Potential Map of Arizona

Bureau of Land Management, 1994

**TURKEY CREEK
WILD AND SCENIC RIVER STUDY AREA**

**GILA RESOURCE AREA
SAFFORD DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT

December, 1994



TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

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TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Turkey Creek were identified in the Safford District Resource Management Plan (Partial Record of Decision, 1992) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability for recommending this portion of Turkey Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

Area is in southeastern Arizona in Graham County, Arizona, approximately 40 miles southwest of Safford. The study area is administered by the Gila Resource Area of the Safford District. The creek lies within the San Pedro River Basin and feeds into Aravaipa Creek. In the study area the 3.2-mile segment of the creek flows during most of year.

Turkey Creek was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the Safford District Resource Management Plan. The river is free-flowing and has outstandingly remarkable scenic, recreational and cultural values. The study area was classified as Recreational in the eligibility evaluation.

B. GENERAL DESCRIPTION OF STUDY AREA

The Turkey Creek Wild and Scenic River Study

**TABLE TC-1
WILD AND SCENIC RIVER STUDY AREA RIVER MILEAGE SUMMARY**

TURKEY CREEK	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	3.2	0	0	3.2
PERCENT	100	0	0	100
TOTAL ACRES	1,100	0	0	1,100
PERCENT	100	0	0	100
SUBSURFACE MINERALS ACRES	1,100	0	0	1,100

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

C. INTERRELATIONSHIPS

1. Bureau of Land Management

Aravaipa Creek, the stream into which Turkey Creek flows, is also under consideration for inclusion in the National Wild and Scenic Rivers System. The Aravaipa Canyon Wilderness borders most of the study area on the west. Aravaipa Canyon Wilderness was first designated by Congress in 1984. A management plan was written for the wilderness area in 1988. The 1990 Arizona Wilderness Bill added 12,711 acres to the original wilderness bringing the total to 19,410 acres.

The Turkey Creek study area is part of the 2,326 acre Turkey Creek Riparian Area of Critical Environmental Concern which was designated to protect riparian woodlands. The study area is within the 21,900 acre Aravaipa Canyon/Turkey Creek Special Recreation Management Area. While the area is administered under the general guidance provided by the resource management plan, no special management plan existed in 1993. A coordinated resource management plan would be developed to direct the management of Bureau of Land Management's multiple-use programs on public lands in the Aravaipa Creek watershed.

**TABLE TC-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE TURKEY CREEK
WILD AND SCENIC RIVER STUDY AREA UNDER OTHER DESIGNATIONS**

TURKEY CREEK STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Turkey Creek Riparian Area of Critical Environmental Concern	560	51
Aravaipa Canyon Wilderness	370	34
Aravaipa Canyon/Turkey Creek Special Recreation Management Area ^{1/}	930	85
Area Outside of Any Special Designation	170	15

^{1/} The Aravaipa Canyon/Turkey Creek Special Recreation Management Area completely overlaps the Turkey Creek Riparian Area of Critical Environmental Concern and the Aravaipa Canyon Wilderness.

2. Other Federal Agencies

No other federal agencies have management jurisdiction in the study area.

3. State of Arizona

There are no Arizona state lands within the wild and scenic river study area.

4. Private

No private lands are affected by the river study area.

D. SCOPING

Scoping meetings to identify public issues concerning the Turkey Creek wild and scenic study area were held in Winkelman April 12,

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

1993, Tucson April 13, 1993, and Klondyke April 21, 1993. Ten people attended the Winkelman meeting, 35 to 40 were at the Tucson meeting, and 21 to 25 attended the Klondyke meeting. Additional public scoping meetings were held throughout the state in March and April, 1993.

The issues generally concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values. Uses or resources raised as issues specifically for this study area are listed below.

Scoping Issues

- Impacts on the Great Western Trail
- Impacts on future rights-of-way
- Impacts on mineral development
- Impacts on livestock grazing
- Impacts on the local population and local economy
- Impacts on water rights
- Impacts on the federal budget from this planning effort
- Impacts on air quality
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable recreational uses
- Impacts on outstandingly remarkable cultural resources

Issues Considered but Not Addressed

- Impacts on the Great Western Trail

A Congressional bill is pending that would designate a loop trail in the surrounding area as the Great Western Trail. The trail would pass through the Turkey Creek study area.

Management actions necessary for implementing the recommended alternative would not affect the pending legislation or any eventual use of the trail.

This issue is not be discussed further.

- Impacts on future rights-of-way

New rights-of-way and developments are prohibited by the management prescriptions in the Aravaipa Wildemess Area.

There are no existing or planned utility facilities in the study area.

The policy of the Bureau of Land Management regarding rights-of-way for wild river study area is as follows:

New transmission lines, including natural gas lines and water lines are discouraged unless specifically authorized by other plans, orders, or laws. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are unavoidable, locations and construction techniques shall be selected to minimized adverse effects on study area related values and fully evaluated during the site selection process.

This issue is not discussed further.

- Impacts on livestock grazing

A portion of one livestock grazing allotment, the South Rim Allotment, is in the study area. The allotment is grazed on a rotation system and an allotment management plan has been completed to manage livestock use. The Turkey Creek Canyon bottom is closed to livestock grazing for protection of the riparian ecosystem and recreation opportunities. In the foreseeable future, the existing fences and corral would be maintained, but no new facilities would be constructed.

Neither of the alternatives would affect livestock grazing in the study area. Grazing would continue to follow the management actions of the Turkey Creek Riparian Area of Critical Environmental Concern and the South Rim

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

Allotment Management Plan.

This issue is not discussed further.

- Impacts on the local population and local economy

Employment and income would not be affected by implementation of the alternatives. No existing minerals operations, exploration, or leasing would be affected. The impacts of closing areas to mineral entry by management provisions of the wilderness area have been discussed in other environmental documents.

National publicity associated with wild and scenic river designation could increase tourism. However, benefits to the local economy from increased tourism from designation of Turkey Creek as a wild and scenic river cannot be estimated. These benefits would very likely be negligible.

This issue is not discussed further.

- Impact on water rights.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

The Bureau of Land Management has not applied for water rights in the study area. Instream flow assessments would be conducted in order to secure instream flow protection.

This issue is not discussed further.

- Impacts on the federal budget from this planning effort

The Bureau of Land Management is required by the Wild and Scenic Rivers Act to study rivers under its administrative control.

This issue is not discussed further.

- Impacts on air quality

The implementation of the management actions associated with any of the alternatives would not have impacts on air quality in the Turkey Creek study area because there would be no surface disturbance or development that would release particulate matter.

This issue is not discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings and on the draft environmental impact statement to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Turkey Creek study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned to management under the existing resource management plan.

The following alternatives are addressed:

Recommended alternative (no action)
All suitable alternative (recreational)

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines the entire Turkey Creek study area as nonsuitable and does not recommend the area for designation. Implementation of this alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions.

Wild and Scenic River Management Actions

Under implementation of the recommended alternative there would be no wild and scenic river management actions.

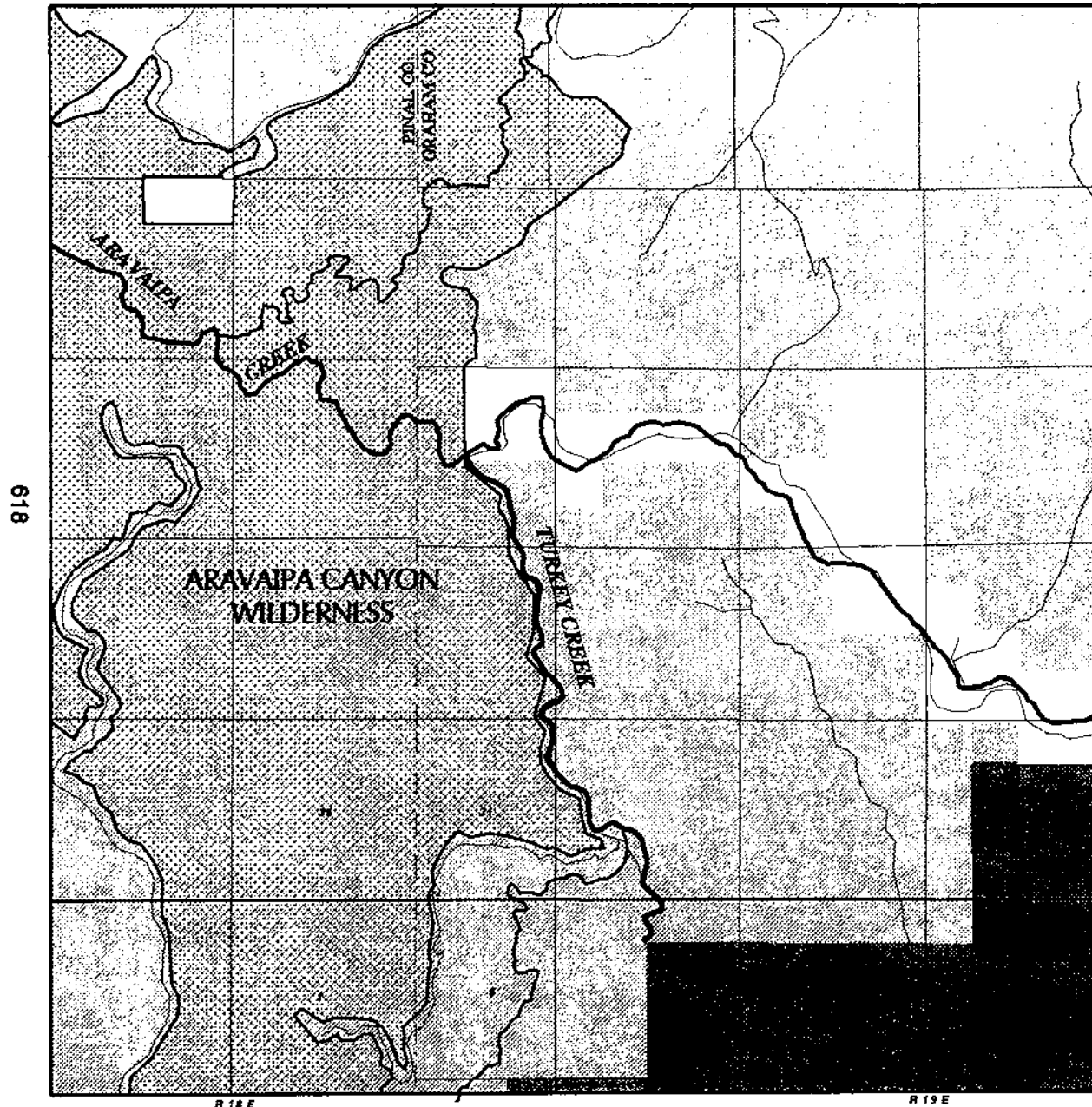
Ongoing Management Actions

The tablelands above the western rim of Turkey Creek are in the Aravaipa Canyon Wilderness.

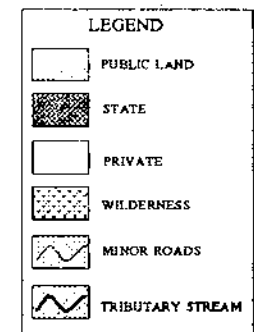
The study area is in the Turkey Creek Riparian Area of Critical Environmental Concern, and the Aravaipa Canyon/Turkey Creek Special Recreation Management Area and the Aravaipa Creek watershed. Ongoing management actions listed below are summaries of selected provisions of the Aravaipa Canyon Wilderness Management Plan, Safford District Resource Management Plan, Turkey Creek Riparian Area of Critical Environmental Concern Plan, and Aravaipa Canyon-Turkey Creek Special Recreation Management Plan.

- Under the recommended alternative, 370 acres of the study area within the Aravaipa Canyon Wilderness would be closed to mineral entry and leasing, and mineral disposals would be prohibited.
- Mineral materials would not be sold within the riparian zone on 730 acres.
- Surface occupancy for mineral leasing would not be permitted in riparian areas on 730 acres.
- Bureau of Land Management approval for plans of operation, for any mineral activities above the level of casual use, would be required on 560 acres.
- The 370 acre portion of the study area within wilderness would be in a right-of-way exclusion area.
- There are no plans to add roads or utility facilities. The low standard dirt road that extends for the length of the study area would remain open to public access.

TURKEY CREEK (Recommended Alternative)



LOCATION DIAGRAM



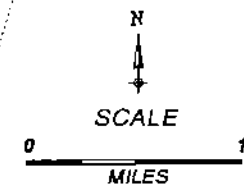
T 6 S

T 7 S

618

R 18 E

R 19 E



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
SAFFORD DISTRICT
GILA RESOURCE AREA

October 1994

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

- Off-highway vehicle use would be limited to existing roads and trails on 730 acres.
- Turkey Creek Canyon would be closed to vehicle use beyond the Oak Grove Canyon corral.
- The maximum length of stay for recreational purposes outside of the Aravaipa Canyon Wilderness would be limited to 14 days on 730 acres within the study area.
- 370 acres would be managed as Visual Resource Management Class I. Management activities would be limited to those that preserve the characteristic landscape.
- The Turkey Creek study area would be managed as a Visual Resource Management Class II area. Management activities on 730 acres outside of the Aravaipa Canyon Wilderness would be limited to those which would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.
- Management would focus on biological diversity on the entire 1100-acre study area.
- Woodcutting would be prohibited on 730 acres.
- Proposals for activities which could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- The Safford District Resource Management Plan includes provisions to conduct ethnographic studies and a Class II inventory of the Aravaipa Canyon Wilderness on 370 acres.
- Water quality would be monitored to meet state water quality standards on 560 acres.
- Current grazing practices would continue under the guidance of the South Rim Allotment Management Plan (BLM 1989) which provides for a rotation grazing system.
- Livestock grazing would continue to be excluded from the lower mile and a quarter of the creek bottom in order to help achieve good ecological condition in the riparian areas by 1997.

C. ALL SUITABLE (RECREATIONAL) ALTERNATIVE

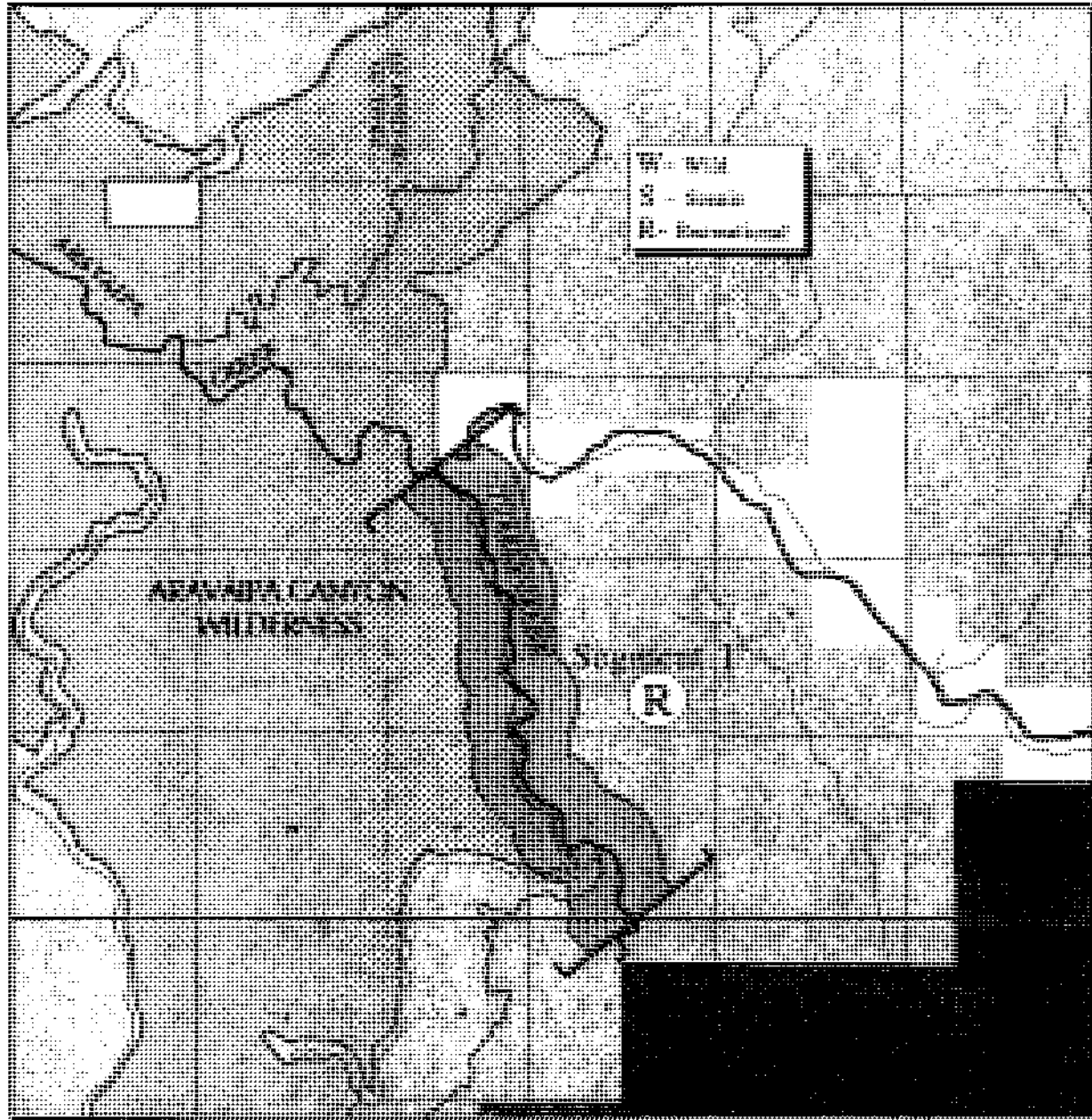
The all suitable alternative determines the entire 3.2-mile length of Turkey Creek as suitable and recommends the study area for designation.

Wild and Scenic River Management Actions

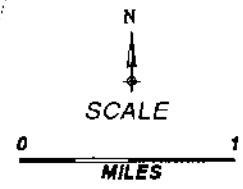
Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992) the following would occur in the implementation of the all suitable alternative recommending Turkey Creek as a Recreational river. Where wild and scenic river management actions overlap ongoing management actions, the more stringent actions would apply.

TURKEY CREEK

(All Suitable Alternative)



LOCATION DIAGRAM



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T 6 S

T 7 S

W - Wild
 S - State
 P - Private

ARIZONA
 WILDERNESS

R

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

- New mining claims would be allowed and existing operations could continue. Reasonable mining claim and mineral lease access would be permitted.
- Mining claims could be patented only as to the mineral estate.
- Water quality would be maintained or improved to meet state standards.
- New hydroelectric power facilities would be prohibited.
- Existing low dams, diversion works, rip rap, and other minor structures would be permitted.
- Construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment would be prohibited.
- New waterway structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.
- Existing parallel roads would be maintained.
- Motorized travel is permitted.
- Interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreation use would be encouraged but public use and access may be regulated and distributed to protect and enhance Recreational river values.
- New minor structures for fish and wildlife habitat protection would be permitted.
- New rights-of-way, transmission lines, natural gas lines, water lines would be discouraged. Where no reasonable alternate location exists,

additional or new facilities would be restricted to existing rights-of-way.

- Instream flow would be quantified. An assessment would be developed in order to secure instream flows associated with protecting the outstandingly remarkable values.

Ongoing Management Actions

The Turkey Creek tablelands above the western rim of the creek are within the Aravaipa Canyon Wilderness. Turkey Creek is in the Turkey Creek Riparian Area of Critical Environmental Concern, and the Aravaipa Canyon/Turkey Creek Special Recreation Management Area and the Aravaipa Creek watershed. **The ongoing management actions listed below, which would occur regardless of wild and scenic river designation,** are summaries of selected provisions of the Aravaipa Canyon Wilderness Management Plan, Safford District Resource Management Plan, Turkey Creek Riparian Area of Critical Environmental Concern, and Aravaipa Canyon-Turkey Creek Special Recreation Management Plan.

- Under the all suitable alternative, 370 acres of the study area within the Aravaipa Canyon Wilderness would be closed to mineral entry, leasing, and mineral disposals would be prohibited.
- Mineral materials would not be sold within the riparian zone on 730 acres.
- Surface occupancy for mineral leasing would not be permitted in riparian areas on 730 acres.
- Bureau of Land Management approval for plans of operations for any mineral activity above casual use would be required on 560 acres.
- The 370 acre portion of the study area within wilderness would be in a right-of-way exclusion area.

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- There are no plans to add roads or utility facilities. The low standard dirt road that extends for the length of the study area would remain open to public access.
- Off-highway vehicle use would be limited to existing roads and trails on 560 acres.
- Turkey Creek Canyon would be closed to vehicle use beyond the Oak Grove Canyon corral.
- The maximum length of stay for recreational purposes outside of the Aravaipa Canyon Wilderness would be limited to 14 days on 730 acres within the study area.
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- Management would focus on biological diversity on the entire 1100-acre study area.
- Woodcutting would be prohibited on 560 acres.
- Proposals for activities which could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- The Safford District Resource Management Plan includes provisions to conduct ethnographic studies and a Class II inventory of the Aravaipa Canyon Wilderness on 370 acres.
- Water quality would be monitored to meet state water quality standards on 560 acres.
- Current grazing practices would continue under the guidance of the South Rim Allotment Management Plan (BLM 1989) which provides for a rotation grazing system.
- Livestock grazing would continue to be excluded from the lower mile and a quarter of the creek bottom in order to help achieve good ecological condition in the riparian areas by 1997.

D. ALTERNATIVES CONSIDERED BUT REJECTED

No other alternatives were suggested by public or other agency sources.

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE TC-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative (no action)	All suitable alternative
Outstandingly Remarkable Scenic Values	Possible minor adverse impacts from a small mining operation; no legislative protection on 730 acres	Possible minor adverse impacts from a small mining operation
Outstandingly Remarkable Recreational Values	No adverse impact; no legislative protection on 730 acres	No impact on outstandingly remarkable recreational values
Outstandingly Remarkable Cultural Resource Values	No adverse impact; no legislative protection on 730 acres	No adverse impact
Minerals Development	No adverse impacts	No adverse impacts

TURKEY CREEK WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Turkey Creek study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System. Further information is contained in the Safford District Resource Management Plan and the Turkey Creek Wild and Scenic suitability determination assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The outstandingly remarkable scenic values within the study area include a colorful conglomerate canyon, largely volcanic in nature, water, and a riparian woodland. The combination of water, vegetation and landform provides a variety in the landscape that produces outstanding scenery. Varied colors and textures in rock formations, contrasting colors and forms of the vegetation in the riparian area and on the canyon slopes, and the linear flow of the perennial water provide the variety that creates the outstanding scene.

The Turkey Creek study area is managed as a Visual Resource Management Class II area.

The study area also contains outstandingly remarkable recreational values. About 1,200 vehicles pass through Turkey Creek each year, with visitors participating in camping, hunting, photography, archaeological site study, picnicking and pleasure driving. A Salado cliff dwelling has been interpreted for public use. A trail to the site has been constructed and the site has been signed. Turkey Creek is a very popular, and well visited, truck or tent camping area. The Rug Road, a four wheel drive road from Aravaipa Creek over Table Mountain to Mammoth, Arizona passes through the study area. The canyon is also extremely popular as a camp for deer and javelina hunters.

The scenery, the desert stream, its tributaries

and the opportunities for bird watching and observing bighorn sheep are the study area's most popular attractions.

Most visits occur during the spring and fall when temperatures are moderate and storms are uncommon.

A bill is currently pending in Congress that would designate a loop trail in the surrounding area as the Great Western Trail. The trail would pass through the Turkey Creek study area.

No additional recreation development are planned in the study area in the foreseeable future.

Outstandingly remarkable cultural resource values occur in the study area. The Aravaipa Canyon region was inhabited as early as 10,000 years ago. The Cochise Culture (10,000 to 2,000 years before the present) probably used the canyon for hunting, fishing, gathering edible plants, as shelter, and as a corridor from the Aravaipa Valley to the San Pedro River Valley. While there are no known sites from this period in the study area, sites have been discovered in the San Pedro Valley about 10 miles west of the study area. If extensive inventories were conducted in the study area, it is anticipated that Cochise Culture sites would be discovered in the area.

Most of the known sites in the study area are from later prehistoric cultures, the agricultural Hohokam, Mogollon, and Salado people (about 1 AD to 1450 AD). Cultural remains from these people are found in overhangs in the canyon walls and in the rim country above the canyon. Most of the overhangs were probably occupied on a seasonal basis and some may contain rock art.

A small cliff dwelling is in Turkey Creek Canyon. The single room structure has a uniquely constructed pitched roof and was probably

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occupied by Salado people about 1350 - 1450 AD. The site has been interpreted for public use.

Some of the rock shelters also contain evidence of Apache use (about 1500 AD to 1871 AD). Apache baskets and bows and arrows were reported to have come from rock shelters in the area. Historically, the Aravaipa Apache homeland centered around the canyon and was part of a raiding route into Sonora, Mexico.

During historic times, Aravaipa Canyon was not only inhabited by the Apache, but it also provided a pass through the Galluro Mountains for Hispanics and Anglo Americans. Earlier pioneers in the surrounding area probably used Turkey Creek, also.

In the foreseeable future, management of cultural resources would include continued inventories and interpretation of select sites for public use.

B. MINERALS

The study area is devoid of mineral occurrences near the surface, but may have occurrences of base and precious metals at depth.

The study area has geologic characteristics unfavorable for the formation and accumulation of petroleum and natural gas. Sand and gravel are present in Turkey Creek, but they are far removed from a market, making the resources commercially unattractive.

The study area is open to mineral entry and mining leasing, but there are no mining claims or mineral leases in the study area. No mineral or energy exploration or development is anticipated in the foreseeable future.

No mining claims or mineral leases were in existence at the time of the Aravaipa Canyon Wilderness designation, therefore, there are no existing mineral rights in that part of the Turkey Creek study area. No other active mining

claims exist in the study area.

C. LANDS

There are 1,100 acres of public land in the study area. All 3.2 miles of the study area are in the Turkey Creek Riparian Area of Critical Environmental Concern, designated in the Safford District Resource Management Plan in 1992. The lands above the west rim of the canyon are part of the Aravaipa Canyon Wilderness. There are no private lands or other ownership in the study area.

A low standard dirt road traverses the length of the study area in the bottom of Turkey Creek Canyon. The road crosses the creek several times. Beyond the canyon it passes over Table Mountain to Mammoth, Arizona. A county road to the east trailhead of Aravaipa Canyon Wilderness, ends at the mouth of Turkey Creek. A trail climbs out of the study area and onto the west rim of Turkey Creek Canyon near the cliff dwelling. This trail provides foot and horse access to the west rim of Turkey Creek Canyon and Aravaipa Canyon Wilderness. No additional roads or trails are planned in the study area.

There are no existing or planned utility facilities in the study area. There are no private or commercial developments in the study area with the exception of some fences and a wooden corral.

D. RECREATION

The recreational values in the Turkey Creek study area are discussed in the section on outstandingly remarkable recreational values.

E. FISH AND WILDLIFE HABITAT

Turkey Creek is a short, narrow canyon with very little buffer area between wildlife and people.

The Turkey Creek study area supports a variety of wildlife, including 35 mammals, 35 reptiles,

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seven native fish and eight amphibian species. In addition, more than 150 bird species ranging from permanent residents to rare or migrant species may be found in this area.

There are significant wildlife, threatened or endangered species populations and habitats within the Turkey Creek canyon. The aquatic connection to Aravaipa Creek and high quality riparian vegetation supports wildlife resources unusual for such a small drainage.

According to the U.S. Fish and Wildlife Service, the endangered species of American peregrine falcon (Falco peregrinus anatum), bald eagle (Haliaeetus leucocephalus) and the lesser long-nosed bat (Leptonycteris curasoae yerbabuena) may occur in the study area. The proposed endangered southwestern willow flycatcher (Empidonax traillii extimus) may also occur in the area.

The small creek and adjacent riparian vegetation provides habitat for two federally threatened fishes, loach minnow (Tiaroga cobitis Girard) and spikedace (Meda fulgida); plus four candidate species, California myotis (Myotis californicus), red bat (Lasiurus borealis), lowland leopard frog (Rana yavapaiensis), and roundtail chub (Gila robusta).

According to the U.S. Fish and Wildlife Service, the cactus ferruginous pygmy-owl (Glaucidium brasilianum cactorum), a candidate category 1 species, may occur in the study area.

The presence of fish is an example of the benefits of good riparian management. Prior to changing grazing practices, the creek always dried in the summer. However, since 1983 there has been a short perennial stretch of flowing water and all seven of the fishes present in Aravaipa Creek have been present at one time or another.

Turkey Creek supports one of the best stands of mixed-broadleaf riparian forests in the Safford District. As a result it is a habitat for many

species of resident and migratory birds such as acorn woodpeckers (Melanerpes formicivorus), elf and screech owls (Micrathene whitneyi and Otus asio) and Bell's vireos (Vireo bellii arizonae). It is an important local place for water and feeding by white-tailed deer (Odocoileus virginianus), javelina (Pecari tajacu) and coatimundi (Nasua narica).

F. RIPARIAN VEGETATION

There are two distinct riparian areas within the Turkey Creek study area. The reach from the mouth to 1.5 miles upstream consists of broad terraces with a lush cover and understory of mixed broadleaf riparian. This reach of Turkey Creek offers a perennial source of water in an otherwise predominantly dry landscape. These terraces coupled with a continual water supply provides for areas of abundant vegetation, cooler and moister conditions, and abundant niches for wildlife. The upper reach consists of broad terraces with scattered groves of broadleaf riparian mixed with areas of mesquite bosque and riparian scrub.

Riparian areas are unique, productive, and important ecosystems in the desert southwest. The riparian habitat of this stream has disproportionate value in southeastern Arizona due to the presence of surface water and the lush vegetation in the lower reach, which is surrounded by harsher, drier, and usually less productive environments.

Livestock grazing has been excluded in the lower 1.25 miles of the study area since 1974. Conditions inside the enclosure have improved dramatically. The riparian vegetation outside of the enclosure is in early successional stage.

G. CULTURAL RESOURCES

Most of the known sites in the study area are from later prehistoric cultures: the agricultural Hohokam, Mogollon, and Salado people (about 1 AD to 1450 AD). The remnants of their occupations are found in overhangs in the

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canyon walls and in the rim country above the canyon. Most of the overhangs were probably occupied on a seasonal basis and some may contain rock art.

A small cliff dwelling is in Turkey Creek Canyon. The single room structure has a uniquely constructed pitched roof and was probably occupied by Salado people about 1350 - 1450 AD. The site has been interpreted for public use.

Some of the rock shelters also contain evidence of Apache use (about 1500 AD to 1871 AD). Apache baskets and bows and arrows were reported to have come from rock shelters in the area. Historically, the Aravaipa Apache homeland centered around the canyon and was part of a raiding route into Sonora, Mexico.

During historic times, Aravaipa Canyon was not only inhabited by the Apache, but it also provided a pass through the Galiuro Mountains for Hispanics and Anglo Americans. Earlier pioneers in the surrounding area probably used Turkey Creek, also.

H. WATER RESOURCES

According to the Safford Resource Management Plan, there is little available data on stream flow for Turkey Creek. Observation has shown the upper reach to have intermittent flow during the dry season. The lower 1/2 mile appears to be generally perennial except during years of drought with low flows of about two gallons per minute and average flows of about 1 to 2 cubic feet per second.

Water quality data are also limited. A study conducted in 1980 showed increasing concentrations of sodium from saline springs and high levels of manganese and calcium.

There are no water source developments within this reach of Turkey Creek. The Bureau of Land Management has not applied for water rights in the study area. Instream flow assessments would be conducted in order to secure instream flow protection.

I. LIVESTOCK GRAZING

A portion of one livestock grazing allotment, the South Rim Allotment, is in the study area. The allotment is grazed on a rotation system and the South Rim Allotment Management Plan has been completed to manage livestock use.

The lower mile and a quarter of Turkey Creek has been closed to livestock grazing for protection of the riparian ecosystem and recreation opportunities.

In the foreseeable future, the existing fences and corral would be maintained, but no new facilities would be constructed.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Turkey Creek study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act for any Congressionally designated wild and scenic river.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine.

Large mining operations would be those involving more than five acres and subject to approval of a Bureau of Land Management approved Mining Plan of Operation.

No oil or gas development is anticipated in the Turkey Creek study area.

All locatable minerals activities above the level of casual use within the wild and scenic rivers system, require a plan of operations.

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B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative determines as not suitable and does not recommend the entire Turkey Creek study area for designation. The outstandingly remarkable values would not receive long-term legislative protection under the Wild and Scenic Rivers Act. However, the outstandingly remarkable scenic, recreational, and cultural resource values would be under the management of the Turkey Creek Riparian Area of Critical Environmental Concern and the Aravaipa Canyon Wilderness Management Plan.

Impacts on Outstandingly Remarkable Scenic Values

In the Turkey Creek study area the combination of water, vegetation and landform constitutes an outstandingly scenic landscape. Varied colors and textures in rock formations, contrasting colors and forms of the riparian vegetation, and the perennial water provide outstanding remarkable scenic values.

In the wild and scenic river study area outstandingly remarkable scenic values would be protected under the recommended alternative by the provisions of the Turkey Creek Riparian Area of Critical Environmental Concern and the Aravaipa Canyon Wilderness Management Plan that prohibit or restrict surface disturbing activities. Three hundred-seventy acres would be managed as Visual Resource Management Class I. Scenic values would be protected by limiting management activities to those that preserve the characteristic landscape.

Scenic values would be protected by limiting management activities on 730 acres outside of the Aravaipa Canyon Wilderness to those that would repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape. Scenic values associated with clean, clear water would be protected by monitoring water quality to

meet state water quality standards on 560 acres.

Scenic values also would be protected on 370 acres of the study area within the Aravaipa Canyon Wilderness where new mineral entry, leasing and material disposals are prohibited. On 730 acres in the riparian zone mineral material sales are prohibited, thus preserving scenic values. This protection also would occur through prohibiting surface occupancy on mineral leases in riparian zone. Additional protection would come from requiring Bureau of Land Management approval of a plans of operation for any size activities above the level of casual use on 730 acres.

Lands in the study area outside the riparian area are open to entry under the mining and mineral leasing laws. Although the suitability assessment states that there currently are no mining claims or mineral leases in the study area, and none are anticipated in the foreseeable future (BLM 1993), consideration of the mining scenario is appropriate. The scenario projects the development of one small mine that would disturb approximately four acres. One road approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could impact the scenic values.

• Conclusion

Scenic values would not receive long-term legislative protection from the Wild and Scenic Rivers Act on 730 acres of the study area.

Implementation of the recommended alternative and the Turkey Creek Riparian Area of Critical Environmental Concern could have minor adverse impacts on the study area's outstandingly remarkable scenic values from

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one small mining operation.

Impacts on Outstandingly Remarkable Recreational Resources

About 1,200 vehicles pass through Turkey Creek each year. Visitors participate in camping, hunting, photography, archaeological site study, picnicking and pleasure driving. A Salado cliff dwelling has been interpreted for public use. A trail to the site has been constructed and the site has been signed. Turkey Creek is a very popular, and well visited, truck or tent camping area. The Rug Road, a four wheel drive road from Aravaipa Creek over Table Mountain to Mammoth, Arizona passes through the study area. The canyon is also extremely popular as a camp for deer and javelina hunters. A bill pending in Congress (1993) would designate a loop trail in the surrounding area as the Great Western Trail. The trail would pass through the Turkey Creek study area. No additional recreation development is planned in the study area for the foreseeable future.

Outstandingly remarkable recreational values would be protected in Turkey Creek Canyon by prohibiting vehicle use beyond the Oak Grove Canyon corral. Off-highway vehicle use would be limited to existing roads and trails on 560 acres. These actions would protect the outstandingly remarkable recreational values in the study area.

The maximum length of stay for recreational purposes outside of the Aravaipa Canyon Wilderness would be limited to 14 days on 730 acres within the study area. This action would help protect the outstandingly remarkable recreational values in the study area by preventing campers from becoming squatters.

• Conclusion

The outstandingly remarkable recreational values would not receive long-term legislative protection under the Wild and Scenic Rivers Act. The implementation of the recommended

alternative would not adversely impact the outstandingly remarkable recreational resources.

Impacts on Outstandingly Remarkable Cultural Resources

Most of the known sites in the study area are from later prehistoric cultures: the agricultural Hohokam, Mogollon, and Salado people (about 1 AD to 1450 AD). Remnants of their occupation are found in overhangs in the canyon walls and in the rim country above the canyon. Most of the overhangs were probably occupied on a seasonal basis and some may contain rock art.

A small cliff dwelling is in Turkey Creek Canyon. The single room structure has a uniquely constructed pitched roof and was probably occupied by Salado people about 1350 - 1450 AD. The site has been interpreted for public use.

Some of the rock shelters also contain evidence of Apache use (about 1500 AD to 1871 AD). Apache baskets and bows and arrows were reported to have come from rock shelters in the area. Historically, the Aravaipa Apache homeland centered around the canyon and was part of a raiding route into Sonora, Mexico.

During historic times, Aravaipa Canyon was not only inhabited by the Apache, but it also provided a pass through the Galluro Mountains for Hispanics and Anglo Americans. Earlier pioneers in the surrounding area probably used Turkey Creek, also.

Under the recommended alternative, protection would be provided to the outstandingly remarkable cultural values on 560 acres by the Turkey Creek Riparian Area of Critical Environmental Concern.

Any proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory

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of the potentially affected area would be completed. If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer. Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

The Safford District Resource Management Plan includes provisions to conduct ethnographic studies and a Class II inventory of the Aravaipa Canyon Wilderness on 370 acres.

- Conclusion

The outstandingly remarkable cultural resource values would not receive long-term legislative protection under the Wild and Scenic Rivers Act. There would be no adverse impacts on the outstandingly remarkable cultural values by implementing the recommended alternative.

Impacts on Minerals Development

The study area is devoid of mineral occurrences near the surface, but may have occurrences of base and precious metals at depth.

The study area has geologic characteristics unfavorable for the formation and accumulation of petroleum and natural gas. Sand and gravel are present in Turkey Creek, but they are far removed from a market, making the resources commercially unattractive. No mining claims or mineral leases were in existence at the time of the Aravaipa Canyon Wilderness designation. Therefore, there are no existing mineral rights in that part of the Turkey Creek study area. No other active mining claims exist in the study area.

Under the recommended alternative, 370 acres of the study area within the Aravaipa Canyon

Wilderness would be subject to the provisions of the Wilderness Act that prohibits new mineral entry, leasing and material disposals.

According to the Safford District Resource Management Plan, mineral materials would not be sold within the riparian zone on 730 acres and surface occupancy would not be permitted in riparian areas on 730 acres. Bureau of Land Management approval would be required for plans of operation for any size operation above the level of casual use on 560 acres of the study area.

Under the implementation of the recommended alternative the minerals scenario provides for the operation of one small mine covering an estimated four acres. This mine would involve a road approximately two miles long and would employ four people.

- Conclusion

Implementation of the recommended alternative would not adversely impact mineral development because the potential is so low.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Turkey Creek study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations

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and constraints associated with the Aravaipa Canyon Wilderness Area, the Turkey Creek Riparian Area of Critical Environmental Concern Plan, and other land use plans.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of the 2,326 acre Turkey Creek Riparian Area of Critical Environmental Concern, established in the Safford District Resource Management Plan (1993), and management actions of the Safford District Resource Management Plan requiring the completion of environmental compliance documents prior to approving site specific activities.

Irretrievable and irreversible commitments involved in the recommended alternative

Under the recommended alternative, mineral entry would not be prohibited. The grazing allotment in the area is currently in the "I" (Improve) category and grazing management practices have been introduced to protect and enhance aquatic, riparian, and wildlife rangeland resources. Desired plant community descriptions would be developed and incorporated into the allotment management plan.

Unavoidable adverse effects

Implementation of the recommended alternative would not have unavoidable adverse impacts.

Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The all suitable alternative determines the 1100

acres of public land in the study area as suitable for designation with a Recreational classification. Wild and scenic river management actions would provide long-term legislative protection to the outstandingly remarkable scenic, recreational and cultural resource values identified for the area in the eligibility evaluation.

Impacts on Outstandingly Remarkable Scenic Values

In the Turkey Creek study area the combination of water, vegetation and landform constitutes an outstandingly remarkable scenic landscape. Varied colors and textures in rock formations, contrasting colors and forms of the riparian vegetation, and the perennial water provide outstanding remarkable scenic values.

Under the all suitable alternative, management actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This action would ensure that the waterway would remain unchanged and protect the existing outstandingly remarkable scenic values.

Although the potential for new mining claims is low, wild and scenic river management actions would restrict patents to the mineral estate. Excluding the surface estate would ensure that after mining has ceased, federal management of the area would continue. This action would benefit the outstandingly remarkable scenic values.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, in the wild and scenic river study area, outstandingly remarkable scenic values would be protected under the all suitable alternative by the provisions of the

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Turkey Creek Riparian Area of Critical Environmental Concern and the Aravaipa Canyon Wilderness Management Plan that prohibit or restrict surface disturbing activities.

Three hundred-seventy acres would be managed as Visual Resource Management Class I. Scenic values would be protected by limiting management activities to those that preserve the characteristic landscape.

Scenic values would be protected by limiting management activities on 730 acres outside of the Aravaipa Canyon Wilderness to those that repeat the basic line form, color and texture found in the predominant natural features of the characteristic landscape.

Scenic values associated with clean, clear water would be protected by monitoring water quality to meet state water quality standards on 560 acres. Scenic values also would be protected on 370 acres of the study area within the Aravaipa Canyon Wilderness by provisions of the Wilderness Act which prohibits new mineral entry, leasing and material disposals.

Mineral materials would not be sold within the riparian zone on 730 acres, thereby preserving scenic values. This protection also would occur by prohibiting surface occupancy on mineral leases in riparian areas on 730 acres. Additional protection would come from requiring Bureau of Land Management approval for plans of operation for mineral activity above the level of casual use on 560 acres.

The lands in the study area outside the wilderness are open to entry under the mining and mineral leasing laws. Although the suitability assessment states that there currently are no mining claims or mineral leases in the study area and none are anticipated in the foreseeable future (BLM 1993), consideration of the mining scenario is appropriate.

In the scenario, one small mine would disturb approximately four acres. One road

approximately two miles long is projected. The small mine would employ approximately four people.

The operation of the mine could impair the outstandingly remarkable scenic values. Noise, excavations, tailings areas, and the potential of hazardous materials spills could degrade the scenic values.

• Conclusion

Scenic values would receive long-term legislative protection from the Wild and Scenic Rivers Act on 730 acres of the study area. Implementation of the all suitable alternative and the Turkey Creek Riparian Area of Critical Environmental Concern could have indirect minor adverse impacts on the study area's outstandingly remarkable scenic values from one small mining operation.

Impacts on Outstandingly Remarkable Recreational Resources

About 1,200 vehicles pass through Turkey Creek each year. Visitors participate in camping, hunting, photography, archaeological site study, picnicking and pleasure driving. A Salado cliff dwelling has been interpreted for public use. A trail to the site has been constructed and the site has been signed.

Turkey Creek is a very popular, and well visited, truck or tent camping area. The Rug Road, a four wheel drive road from Aravaipa Creek over Table Mountain to Mammoth, Arizona passes through the study area. The canyon is also extremely popular as a camp for deer and javelina hunters.

A bill is currently pending in Congress (1993) that would designate a loop trail in the surrounding area as the Great Western Trail. The trail would pass through the Turkey Creek study area.

No additional recreation development is planned

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in the study area for the foreseeable future.

Under the all suitable alternative Scenic River management actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This action would ensure that the waterway would remain unchanged and protect the existing outstandingly remarkable recreational values.

Although the potential for new mining claims is low, wild and scenic river management actions would restrict new mining claims to mineral estate patents. Excluding the surface estate would ensure that after mining has ceased, federal management of the area would continue. This would benefit the outstandingly remarkable recreational values,

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, outstandingly remarkable recreational values would be protected in Turkey Creek Canyon by prohibiting vehicle use beyond the Oak Grove Canyon corral. Off-highway vehicle use would be limited to existing roads and trails on 560 acres. These actions would protect the outstandingly remarkable recreational values in the study area.

The maximum length of stay for recreational purposes outside of the Aravaipa Canyon Wilderness would be limited to 14 days on 730 acres within the study area. This action would help protect the outstandingly remarkable recreational values in the study area by preventing campers from becoming squatters.

The outstandingly remarkable recreational values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

Implementing the all suitable alternative would have no measurable adverse impacts on the current visitor use level in the study area.

• Conclusion

The outstandingly remarkable recreational values would receive long-term legislative protection under the Wild and Scenic River Act.

The implementation of the all suitable alternative would not adversely impact the outstandingly remarkable recreational resources.

Impacts on Outstandingly Remarkable Cultural Resources

Most of the known sites in the study area are from later prehistoric cultures: the agricultural Hohokam, Mogollon, and Salado people (about 1 AD to 1450 AD). Remnants of their occupation are found in overhangs in the canyon walls and in the rim country above the canyon. Most of the overhangs were probably occupied on a seasonal basis and some may contain rock art.

A small cliff dwelling is in Turkey Creek Canyon. The single room structure has a uniquely constructed pitched roof and was probably occupied by Salado people about 1350 - 1450 AD. The site has been interpreted for public use.

Some of the rock shelters also contain evidence of Apache use (about 1500 AD to 1871 AD). Apache baskets and bows and arrows were reported to have come from rock shelters in the area. Historically, the Aravaipa Apache homeland centered around the canyon and was part of a raiding route into Sonora, Mexico.

During historic times, Aravaipa Canyon was not only inhabited by the Apache, but it also provided a pass through the Galluro Mountains for Hispanics and Anglo Americans. Earlier pioneers in the surrounding area probably used Turkey Creek, also.

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Under the all suitable alternative, management actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment. This action would ensure that the waterway would remain unchanged and protect the existing outstandingly remarkable cultural values.

Although the potential for new mining claims is low, wild and scenic river management actions would restrict patents to the mineral estate. Excluding the surface estate would ensure that after mining has ceased, federal management of the area would continue. This would benefit the outstandingly remarkable cultural values.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, under the All Suitable, protection would be provided to the outstandingly remarkable cultural values on 560 acres by the Turkey Creek Riparian Area of Critical Environmental Concern.

Any proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed. If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer. Protection measures, such as fencing or periodic patrolling, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

The Safford District Resource Management Plan includes provisions to conduct ethnographic

studies and a Class II inventory of the Aravaipa Canyon Wilderness on 370 acres.

• Conclusion

The outstandingly remarkable cultural resource values would receive long-term legislative protection under the Wild and Scenic Rivers Act.

There would be no adverse impacts on the outstandingly remarkable cultural values by implementing the all suitable alternative.

Impacts on Minerals Development

The study area is devoid of mineral occurrences near the surface, but may have occurrences of base and precious metals at depth.

The study area has geologic characteristics unfavorable for the formation and accumulation of petroleum and natural gas. Sand and gravel are present in Turkey Creek, but they are far removed from a market, making the resources commercially unattractive. No mining claims or mineral leases were in existence at the time of the Aravaipa Canyon Wilderness designation. Therefore, there are no existing mineral rights in that part of the Turkey Creek study area. No other active mining claims exist in the study area.

Under recreational river management, new mining claims would be restricted to mineral estate patents. While this restriction may pose difficulties to some operations that require outside financing its impact on minerals operation would be minimal.

Ongoing management actions described in Chapter II would affect minerals development. For instance, under the all suitable alternative, 370 acres of the study area within the Aravaipa Canyon Wilderness would be subject to the provisions of the Wilderness Act which prohibits new mineral entry, leasing and material disposals.

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According to the Safford District Resource Management Plan, mineral materials would not be sold within the riparian zone on 730 acres and surface occupancy would not be permitted in riparian areas on 730 acres. Bureau of Land Management approval would be required for plans of operation for any mineral above the level of casual use on 560 acres of the study area.

Under the implementation of the all suitable alternative the minerals scenario provides for the operation of one small mine covering an

estimated four acres. This mine would involve a road approximately two miles long and would employ four people.

- Conclusion

Implementation of the all suitable alternative would not adversely impact mineral development because the potential is so low.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Turkey Creek Wild and Scenic River Study Area environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the Environmental Impact Document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Safford District Resource Management Plan (1993) that Turkey Creek was eligible for further wild and scenic river study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Safford Resource Management Plan is on file at the Safford District Office, Safford, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Turkey Creek Wild and Scenic Study Area were held in Winkelman April 12, 1993, Tucson April 13, 1993, and Klondyke April 21, 1993. Ten people attended the Winkelman meeting, 35 to 40 were at the Tucson meeting, and 21 to 25 attended the Klondyke meeting.

Five interagency public informational meetings

for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource

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area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

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M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

C. Laver, Planning and Environmental Coordinator, Phoenix District.

P. Seegmiller, Range Conservationist/Planning and Environmental Coordinator, Arizona Strip District, Vermilion Resource Area.

B. Smith, Renewable Resource Advisor, Yuma District.

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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**VIRGIN RIVER
WILD AND SCENIC RIVER STUDY AREA**

**SHIVWITS RESOURCE AREA
ARIZONA STRIP DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

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VIRGIN WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of the Virgin River were identified in the Arizona Strip Resource Management Plan (1991) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability of these portions of the Virgin River and recommending them to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Virgin River Wild and Scenic River Study Area begins approximately twelve miles southwest of St. George, Utah, and runs through the Virgin River Gorge in Mohave County, Arizona (Map VR-1). The study area extends from the Utah-Arizona state line 34.5 river miles to the Nevada-Arizona state line near Mesquite, Nevada (Virgin River Suitability Assessment, 1993).

Of the 34.5 river miles in the Virgin River study area, approximately 27.5 miles are public lands managed by the Shilwits Resource Area of the Bureau of Land Management, 6 miles are privately owned, and 0.5 miles are lands belonging to the State of Arizona. The lands in and adjacent to river segments 1, 2, and 3 are public lands, while public, private, and state-owned lands are in and adjacent to segment 4.

The study area ranges in elevation from 1,500 to 2,340 feet. It is in the transition zone between the Colorado Plateau and the Basin and Range Physiographic Provinces. It is part of the Mojave desertscrub biotic community.

The Virgin River drains the plateau country around Zion National Park as well as most of Washington County, Utah. The Virgin River is a major tributary to the Colorado River, which it joins at Lake Mead near Overton, Nevada. The Virgin River is not included in the Colorado River Compact.

The Virgin River was determined to be eligible for inclusion in the wild and scenic rivers system in the Arizona Strip Resource Management Plan. The river is free-flowing and has outstandingly remarkable scenic, fish and wildlife habitat, and aquatic and riparian values.

The Virgin River study area consists of four river segments in Arizona, each with distinct characteristics and values.

Segment 1 runs 2.9 miles from the Utah-Arizona state line to the first Interstate Highway 15 bridge through a rugged canyon with walls 300 to 500 feet high. Access is possible only by foot, horseback, or floating down the river.

This segment is entirely within the Beaver Dam Mountain Wilderness Area and the Virgin River Corridor Area of Critical Environmental Concern, and there is no shoreline development. Evidence of human use is limited to a fence that approaches the water's edge and one small corral that is no longer in use. The shoreline consists of bare rock or narrow strips of sand and gravel, with riparian vegetation that includes salt cedar (Tamarix pentandra), willow (Salix sp.), and cottonwood (Populus Fremontii).

Segment 1 has been recommended as suitable for designation as Wild. Scenic quality, fish and wildlife habitat, and aquatic and riparian features are outstanding remarkable values.

Segment 2 flows for 7.3 miles through the high quality scenery of the Virgin River Gorge from the first Interstate Highway 15 bridge to the Virgin River Campground. The proximity of Interstate Highway 15 at four points where talus

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

slopes from highway construction form the riverbank lessens the scenic quality of this segment. Legal access along this segment is limited to the area around the Virgin River Campground. Segment 2 is within the Palute-Beaver Dam Mountain Wilderness Area except where it is within 400 feet of the edge of the right-of-way of Interstate Highway 15; the segment is entirely within the Virgin River Corridor Area of Critical Environmental Concern.

Segment 2 has been determined as suitable for designation as Scenic. Scenic quality, fish and wildlife habitat, and aquatic and riparian features are outstanding remarkable values.

Segment 3 flows 7.4 miles from the Virgin River Campground to the mouth of the Virgin River Gorge, mostly within the Interstate Highway 15 right-of-way. Outside of the right-of-way it is within the Palute or Beaver Dam Mountains Wilderness Areas. While it provides challenging river-running opportunities in the narrowest, steepest part of the gorge, the river flows under four bridges, alongside the freeway, and through several diversions built for highway construction.

Segment 3 is within the Beaver Dam Mountain Wilderness Area except where it is within 400

feet of the right-of-way of Interstate Highway 15; the segment is entirely within the Virgin River Corridor Area of Critical Environmental Concern.

Segment 3 has been determined as suitable for designation as Recreational. Aquatic and riparian features are outstandingly remarkable values.

Segment 4 runs 16.9 miles from the mouth of the Virgin River Gorge to the Nevada-Arizona state line near Mesquite, Nevada, through a gently rolling, incised bajada at the base of the Beaver Dam and Virgin Mountains. It contains sandy shorelines and more riparian vegetation than the canyon segments. There are several legal vehicular access points along the shoreline of this segment. Human developments (houses and agricultural fields) are visible, and a small diversion dam near Mesquite supplies water to fields. This segment includes all the non-federal lands and mining claims. All public lands along segment 4 are within the Virgin River Corridor Area of Critical Environmental Concern.

Segment 4 has been determined to be suitable for designation as Recreational. This corresponds to the classification of the adjoining downstream river segment in Nevada. Aquatic and riparian features are outstandingly remarkable values.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

**TABLE VR-1
RIVER MILEAGE SUMMARY**

VIRGIN RIVER	BLM	STATE OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	29.2	0.2	5.1	34.5
PERCENT	84.6	0.6	14.8	100
TOTAL ACRES	9,344	64.0	1,632	11,040
PERCENT	84.6	0.6	14.8	100
SUBSURFACE MINERALS ACRES	9,184	64.0	1,792	11,040

C. INTERRELATIONSHIPS

1. Bureau of Land Management

Public lands in the Virgin River study area are managed in accordance with the Arizona Strip District Resource Management Plan.

The Virgin River study area is partially within the Palute and Beaver Dam Mountains Wilderness Areas (Table VR-2). These wilderness areas were designated in 1984 and are managed in accordance with the Palute-Beaver Dam Mountains Wilderness Management Plan (1988). The Beaver Dam Wilderness area extends into Utah.

The river runs through or adjacent to the Palute and Beaver Dam Mountains Wilderness Areas for 19 miles (segments 1, 2, and 3). Segment 1 is entirely within the wilderness. The wilderness boundary is 400 feet from the Interstate Highway 15 right-of-way. Within the 400-foot freeway setback the river is within the Virgin River Scenic Withdrawal, and is managed in a manner similar to wilderness. The river flows in and out of wilderness in segment 2 and is mostly within the 400-foot freeway setback in

segment 3.

The entire study area is within the Virgin River Area of Critical Environmental Concern. This Area of Critical Environmental Concern has recreation, scenic, wilderness, riparian, and wildlife values that are protected by management prescriptions designed to minimize impacts from human activities. A plan is proposed for development in 1995.

Wildlife populations and habitats in the Virgin River study area are managed in accordance with the Virgin River-Pakoon Basin Habitat Management Plan, a cooperative plan between the Bureau of Land Management and Arizona Game and Fish Department (1983).

Livestock grazing is managed in accordance the decisions in the Shilwits Grazing Environmental Impact Statement (1981) and allotment management plans. One grazing allotment is administered by the Utah Bureau of Land Management Dixie Resource Area.

The public land portions of the Virgin River in Utah are managed by the Dixie Resource Area. The Draft Dixie Resource Management Plan

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

determined that the Virgin River was eligible from the city of St. George, Utah, to the Arizona-Utah state line. The section below Bloomington, Utah was tentatively classified as Scenic and that portion of the Virgin River Gorge in Utah as Wild.

The public land portion of the Virgin River in Nevada is managed by Stateline Resource Area. This portion of the Virgin River has been tentatively classed as Recreational.

The record of decision for the Arizona Strip Resource Management Plan (1991) recommended studying the Virgin River in conjunction with adjoining states to determine if it is suitable for designation.

**TABLE VR-2
BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE VIRGIN RIVER
WILD AND SCENIC STUDY AREA UNDER OTHER DESIGNATIONS**

VIRGIN RIVER STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Palute and Beaver Dam Mountains Wilderness Areas	5,088	46
Virgin River Corridor Area of Critical Environmental Concern	9,344	100

2. National Park Service

The Virgin River flows from public lands in Nevada into the Lake Mead National Recreation Area, which is managed by the National Park Service. The Virgin River and several tributaries pass through Zion National Park in Utah above the towns of Springdale and Rockville.

3. Bureau of Reclamation

The Bureau of Reclamation is currently evaluating the feasibility of the Lower Virgin River Project that would divert water from the river for use in southern Nevada.

One potential water diversion site identified by the Bureau of Reclamation is at or near the existing Mesquite, Nevada diversion dam (Memorandum from Regional Environmental Officer, Lower Colorado Region, Bureau of Reclamation, to District Manager, Arizona Strip, received 5/27/93)

4. U.S. Fish and Wildlife Service

The Fish and Wildlife Service has responsibilities under the Endangered Species Act to stabilize and recover threatened or endangered wildlife species and their native habitats. Virgin River chub (*Gila seminuda*) and woundfin minnow (*Plagopterus argentissimus*) are two native fish species in the Virgin River that are currently listed under the Endangered Species Act as endangered.

Virgin River spinedace (*Lepidomeda mollispinus mollispinus*) is another fish species inhabiting the river that is proposed for listing as threatened under the Endangered Species Act.

5. State of Arizona

The Arizona Game and Fish Department is responsible for managing wildlife populations

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

throughout the state. The Arizona State Land Department is responsible for managing state lands within or adjacent to the study area.

Arizona is a party to the Colorado River Compact. Although the Virgin River is a major tributary to the Colorado River, which it joins at Lake Mead near Overton, Nevada, it is not included in the Colorado River Compact.

6. Local Government Agencies

The entire Virgin River study area is within Mohave County, Arizona.

7. Private

There are private lands used for residences and/or agricultural purposes along the river in segment 4. The diversion dam near the Nevada-Arizona stateline is operated by the Farmstead Water Company of Mesquite, Nevada.

D. SCOPING

Scoping meetings specifically highlighting the issues concerning the Virgin River study area were held in Phoenix April 14 and in St. George, Utah April 16, 1993. Fifty-five to 60 people attended the Phoenix meeting and 20 to 25 people attended the St. George meeting.

These issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Scoping Issues

- Impacts on commercial, agricultural, and residential development in towns and cities
- Impacts on mineral development
- Impacts on water rights
- Impacts on water development and diversions

- Impacts on recreation opportunities
- Impacts on federally listed fish and wildlife species
- Impacts on air quality
- Impacts on outstandingly remarkable scenic values
- Impacts on outstandingly remarkable fish and wildlife values

- Impacts on outstandingly remarkable aquatic and riparian values

Issues Considered But Not Addressed

- Impacts on commercial, agricultural, and residential development in towns and cities

Congressional action to designate or not designate wild and scenic rivers would have no direct impacts on potential commercial, agricultural, or residential development in towns and cities.

The Bureau of Land Management has no authority over nonfederal land and only can address the public land it administers. In wild and scenic river administration, the management protection would be applied to the entire river study area except for private or state lands.

Congressional action to include the Virgin River in the National Wild and Scenic Rivers System would not affect the use of private property. Designation does not open private lands to public access. The right to buy and sell property will not be affected.

This issue will not be discussed further.

- Impacts on water rights

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

The Bureau of Land Management has filed for an instream flow water right with the Arizona Department of Water Resources subject to state law and independent of Wild and Scenic River Act procedures. The filing may be adjusted based on the results of an ongoing comprehensive instream flow incremental modeling study. Recreation, fish, and wildlife are recognized as beneficial uses under the state system. The Bureau of Land Management has no plans to file for additional instream flows, unless studies indicate they are necessary to support special status fish. No federal reserved water right was asserted based on wilderness designation.

This issue will not be discussed further.

- Impacts on recreation opportunities

Segments 1, 2, and 3 are managed in accordance with the Paiute-Beaver Dam Wilderness Management Plan. There would be no change in management under any of the alternatives. Segment 4 is entirely within the

Virgin River Area of Critical Environmental Concern and there would be no change in management under any of the alternatives.

This issue will not be discussed further.

- Impacts on federally-listed fish and wildlife species

The Endangered Species Act requires the Bureau of Land Management, in consultation with the U.S. Fish and Wildlife Service, to ensure that any action it funds, authorizes, or carries out will not jeopardize the continued existence of any federally-listed species.

This issue will not be discussed further.

- Impacts on air quality

The implementation of the management actions in the alternatives will not have impacts on air quality in the Virgin River study area because there are no actions that will cause surface disturbance or release particulate matter into the air.

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the scoping meetings **and on the draft environmental impact statement** to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Virgin River study area under each alternative. The projections are professional estimates of reasonably foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities that may occur as either a result of wild and scenic river designation or the area being returned to multiple use management.

The following alternatives are addressed:

Recommended alternative (study river)
All suitable alternative
No action alternative

B. RECOMMENDED ALTERNATIVE

The recommended alternative determines the Virgin River study area to be suitable for inclusion in the National Wild and Scenic Rivers System, and recommends designation as a Study River under Section 5(a) of the Wild and Scenic Rivers Act (PL 90-542). A draft of the proposed legislation developed by the Bureau of Land Management to amend the Act is contained in Appendix 2 of this document.

Implementation of the recommended alternative would continue the protective status associated with the eligibility findings defined in the Arizona Strip District Resource Management Plan.

Wild and Scenic River Management Actions

The recommended alternative proposes the

Virgin River study area be designated as a study river. There would be no wild and scenic river management actions associated with the implementation of this alternative.

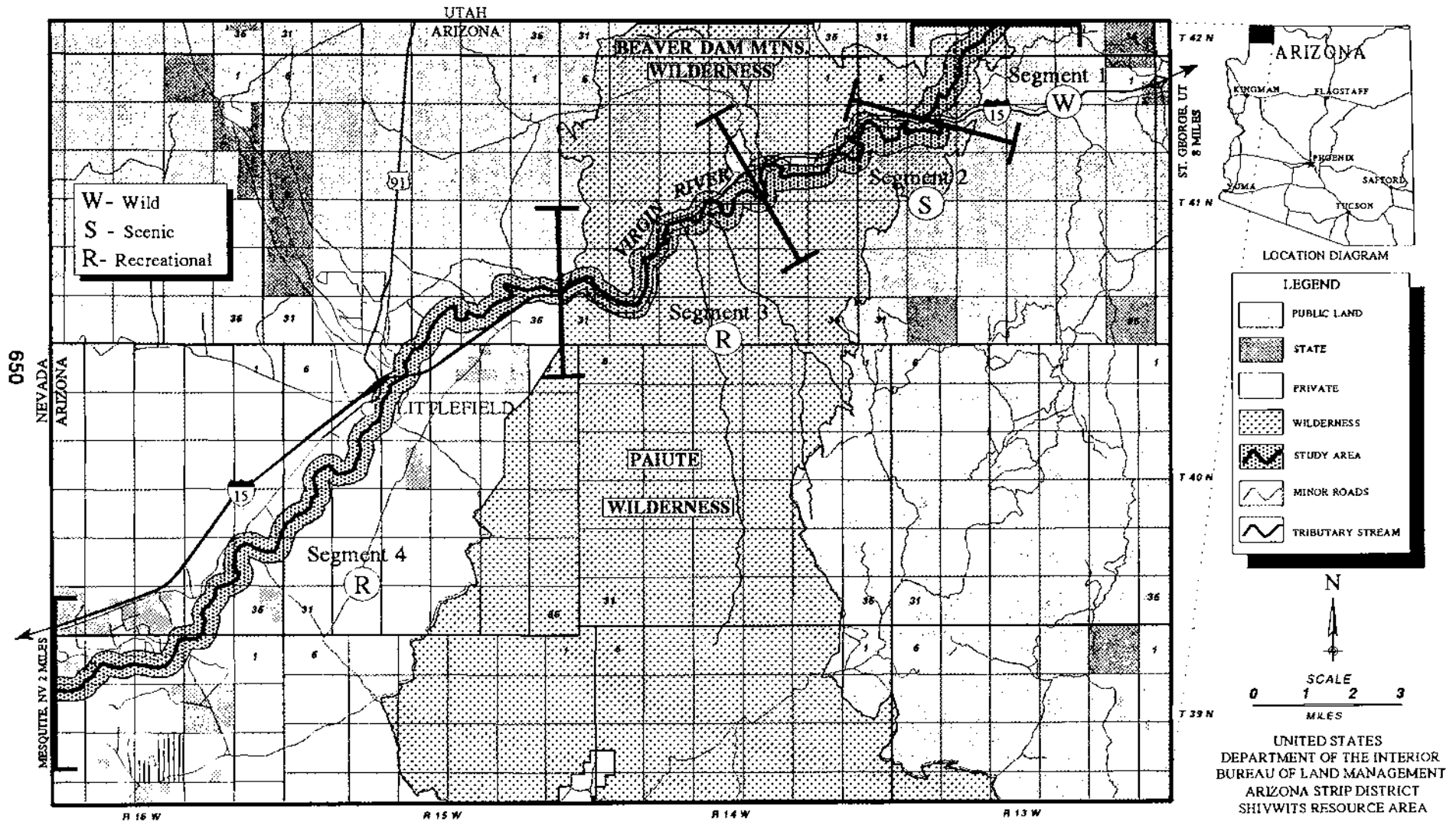
Ongoing Management Actions

The ongoing management actions that would occur regardless of wild and scenic river designation are listed below. These actions are summaries of selected provisions of the Paiute-Beaver Dam Mountains Wilderness Management Plan, the Arizona Strip District Resource Management Plan, and the Virgin River Corridor Area of Critical Environmental Concern.

- New mineral entry is prohibited in the portion of the study area within wilderness or within the Virgin River Scenic withdrawal (segments 1, 2, and 3).
- Plans of operations are required for locatable mineral development activities, above the level of casual use, in segment 4 in accordance with the Virgin River Area of Critical Environmental Concern.
- Mineral material disposal is prohibited in segment 4 in accordance with the Virgin River Area of Critical Environmental Concern.
- **Segment 4 is open to oil and gas leasing subject to standard terms and conditions.**
- Up to 1,500 acres of land with high riparian values would be acquired. Acquisition would be on a willing seller-willing buyer basis or by exchange.
- Up to 100 acres of public land within the study area could be sold or exchanged.

VIRGIN RIVER

(Recommended Alternative)



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- An interchange/freeway access overpass could be constructed at Desert Springs.
- A concrete and steel bridge on a 100 foot wide right-of-way could be built over the Virgin River between Big Bend and the Peppermill Golf Course in segment 4.
- Existing rights-of-ways would be continued.
- The Virgin River Corridor would be designated as a special recreation management area identifying recreation as a priority land use.
- Camping would be limited to 14 days.
- Motorized vehicle use is prohibited in wilderness (segments 1, 2, 3).
- Off-highway vehicle use is limited to designated roads and trails in the non-wilderness portions of the study area.
- A river-running plan would be developed that would specify locations (and potential development) of put-in/take-out access points.
- Any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service.
- Exotic wildlife species and feral livestock would be controlled in the study area in cooperation with the Arizona Game and Fish Department.
- The Recovery Plan for Woundfin Minnow and Virgin River Chub would be implemented. (Remove woundfin and other species from the river, treat the river with piscicide to remove exotic fish species that compete or prey upon endangered native fish, and replace removed woundfin and other native fish.)
- A barrier to prevent the upstream migration of exotic fish could be constructed in segment 4, perhaps in association with the proposed bridge over the Virgin River from Scenic, Arizona, to Interstate Highway 15. A second barrier could also be developed, although the location is not yet known (Woundfin Recovery Plan).
- Limit down and dead wood collection to personal campsite use in accordance with the Virgin River Area of Critical Environmental Concern.
- All new proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- Sites evaluated as eligible for the National Register of Historic Places would be avoided by proposed activities.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or site patrols, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- An ongoing instream flow study would be completed to determine minimum amounts to protect outstandingly remarkable values.
- Allotments within Desert Wildlife Management Areas on the Beaver Dam and Virgin Slopes would be managed to meet the goals and objectives of the Desert Tortoise Recovery Plan.
- Livestock grazing on the Cedar Wash, Highway, Beaver Dam Slope, Mesquite, and Littlefield Allotments would not be allowed annually March 15 through June 1 (U.S. Fish and Wildlife Service biological opinion on livestock grazing).
- Livestock grazing use in the Palute and

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

Beaver Dam Mountains Wilderness Area would not exceed levels of actual use at the time of wilderness designation.

C. ALL SUITABLE ALTERNATIVE

The all suitable alternative determines the Virgin River is suitable for designation with segment 1 as Wild, segment 2 Scenic, and segments 3 and 4 as Recreational, and recommends the river for designation.

Wild and Scenic River Management Actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following would occur in the implementation of the all suitable alternative recommending the Virgin River segments as Wild, Scenic, and Recreational. Where wild and scenic river management actions overlap ongoing management actions the more stringent action would apply.

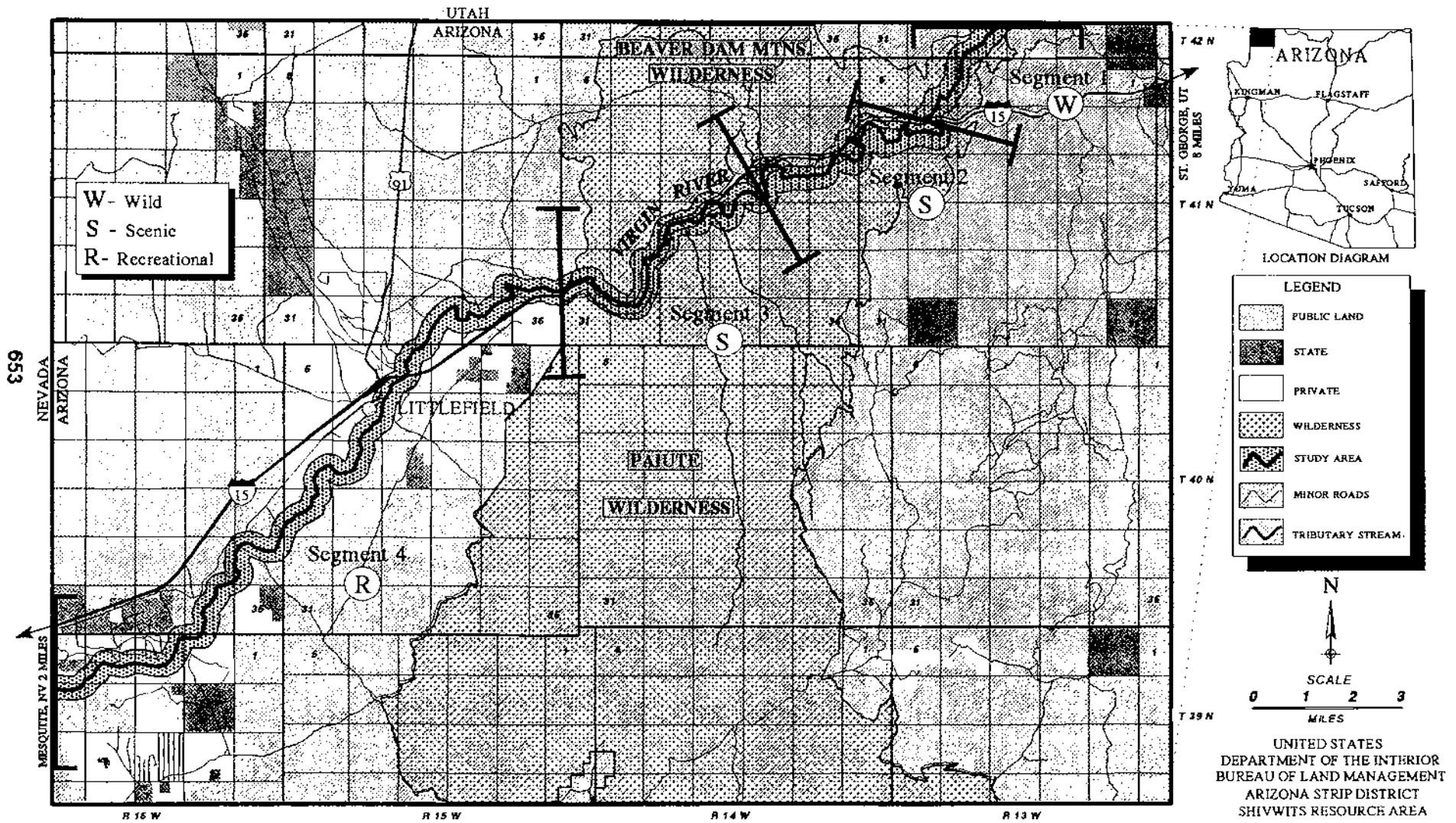
- On the Wild segment new mining claims and mineral leases would be prohibited. Mining entry would remain open in the scenic and recreational segments.
- Valid existing claims would be recognized and existing mining activity would be allowed to continue.
- If a mining claim were to be patented, only the mineral estate would be transferred to private ownership. The surface would remain in the public domain.
- Water quality would be maintained or improved.
- Hydroelectric power facilities would be prohibited.
- In the Wild segment flood control dams, levees, or other works would be prohibited. In

the scenic and recreational segments new waterway structures could be allowed if the area remains generally natural in appearance and the structures harmonize with the surrounding environment.

- In the Wild segment all water supply dams and major diversions would be prohibited. In the Scenic and Recreation segments existing low dams, diversion works, riprap, and other minor structures would be permitted.
- In the Wild segment construction of new roads or trails for motorized travel would be prohibited. In the scenic and recreation segments existing parallel roads would be maintained.
- Normally, motorized use would be restricted in the Wild segment. Exceptions could be for search and rescue and other emergency situations. In the scenic and recreation segments motorized travel is permitted.
- In the Wild segment, campgrounds, interpretive centers, or administrative headquarters within the river corridor would be prohibited. In the scenic and recreation segments interpretive centers, administrative headquarters, campgrounds, and picnic areas could be established.
- Recreation use would be encouraged in Wild river areas, but public use and access could be regulated.
- In the Wild segment woodcutting would not be permitted except when needed to clear trails, for visitor safety or to control fire. Woodcutting would be allowed in the Scenic and Recreation segments.
- New transmission lines, natural gas lines and water lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities would be restricted to existing rights-of-way.

VIRGIN RIVER

(All Suitable Alternative)



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- Instream flows would be quantified and protected. An instream flow assessment would be completed in order to secure instream flow protection for outstandingly remarkable applicable values.

Ongoing Management Actions

The ongoing management actions that would occur regardless of wild and scenic river designation are listed below. These actions are summaries of selected provisions of the Palute-Beaver Dam Mountains Wilderness Management Plan, the Arizona Strip District Resource Management Plan, and the Virgin River Corridor Area of Critical Environmental Concern Management.

- New mineral entry is prohibited in the portion of the study area within wilderness or the Virgin River withdrawal (all of segments 1, 2, and 3).

- The portion of the study area within wilderness or within the Virgin River withdrawal (all of segments 1, 2, and 3) is closed to mineral leasing.

- Approved plans of operations are required for locatable mineral development activities, above casual use, in segment 4 in accordance with the Virgin River Area of Critical Environmental Concern.

- Mineral material disposal is prohibited in segment 4 in accordance with the Virgin River Area of Critical Environmental Concern.

- Up to 1,500 acres of land with high riparian values would be acquired. Acquisition would be on a willing seller-willing buyer basis or by exchange.

- Up to 100 acres of public land within the study area could be sold or exchanged.

- An interchange/freeway access overpass could be constructed at Desert Springs.

- A concrete and steel bridge on a 100 foot wide right-of-way could be built over the Virgin River between Big Bend and the Peppermill Golf Course in segment 4.

- Existing rights-of-way would be continued.

- The Virgin River corridor would be designated as a special recreation management area identifying recreation as a priority land use.

- Camping would be limited to 14 days.

- Motorized vehicle use is prohibited in the wilderness (segments 1, 2, 3).

- Off-highway vehicle use is limited to designated roads and trails in the non wilderness portions of the study area.

- A river-running plan would be developed that would specify location (and potential development) of put-in/take-out access points.

- Any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service.

- Exotic wildlife species and feral livestock would be controlled in the study area in cooperation with the Arizona Game and Fish Department.

- The Woundfin Recovery Plan would be implemented. (Remove woundfin and other species from the river, treat the river with piscicide to remove exotic fish species that compete or prey upon endangered native fish, and replace removed woundfin and native fish.)

- A barrier to prevent the upstream migration of exotic fish could be constructed in segment 4, perhaps in association with the proposed bridge over the Virgin from Scenic, Arizona, to Interstate Highway 15. A second barrier could also be developed, although the location is not yet known (Woundfin Recovery Plan).

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

- Limit down and dead wood collection to personal campsite use in accordance with the Virgin River Area of Critical Environmental Concern.
- All new proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.
- In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- Sites evaluated as eligible for the National Register of Historic Places would be avoided by proposed activities.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or site patrols, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- An instream flow study would be completed to determine minimum amounts to protect outstandingly remarkable values.
- Allotments within Desert Wildlife Management Areas on the Beaver Dam and Virgin Slopes would be managed to meet the goals and objectives of the Desert Tortoise Recovery Plan.
- Livestock grazing on the Cedar Wash, Highway, Beaver Dam Slope, Mesquite, and Littlefield Allotments would be prohibited annually from March 15 through June 1 (U.S. Fish and Wildlife Service biological opinion on livestock grazing).
- Livestock grazing use in the Paiute and Beaver Dam Mountains Wilderness Area would not exceed levels of actual use at the time of wilderness designation.

D. NO ACTION ALTERNATIVE (NOT SUITABLE)

The no action alternative determines that the Virgin River study area is nonsuitable and would not recommend the study area for inclusion in the National Wild and Scenic Rivers System. Implementation of the no action alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple use management prescriptions defined in the Arizona Strip District Resource Management Plan, and the Paiute-Beaver Dam Mountain Wilderness Management Plan.

Wild and Scenic River Management Actions

The no action alternative recommends nondesignation for the entire Virgin River study area. There would be no wild and scenic river management actions. The outstandingly remarkable values identified in the eligibility evaluation would not receive long-term legislative protection.

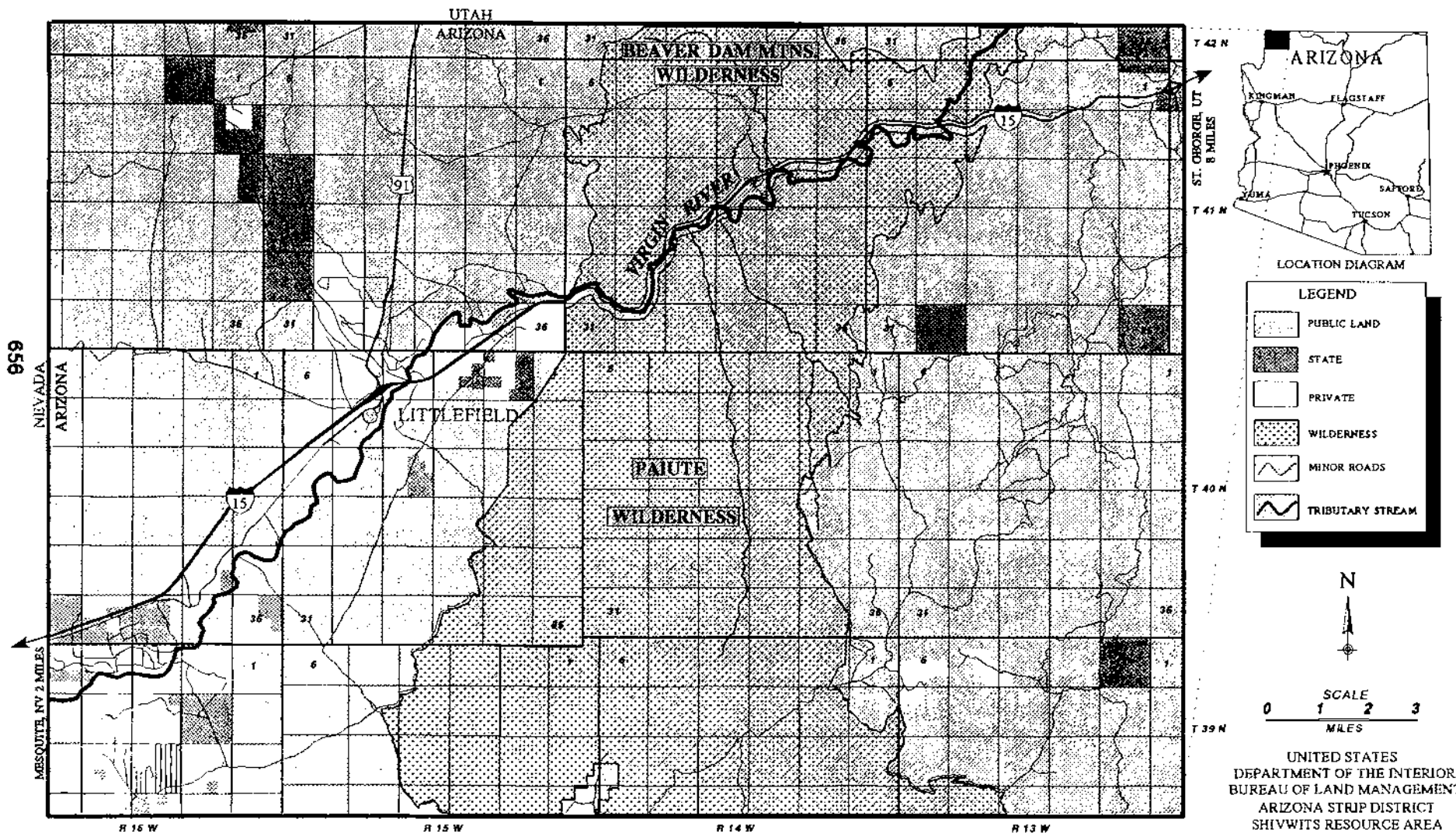
Ongoing Management Actions

The ongoing management actions that would occur in the implementation of the no action alternative are listed below. These actions are summaries of selected provisions of the Paiute-Beaver Dam Mountains Wilderness Management Plan, the Arizona Strip District Resource Management Plan, and the Virgin River Corridor Area of Critical Environmental Concern.

- New mineral entry is prohibited in the portion of the study area within wilderness or the Virgin River Scenic withdrawal (all of segments 1, 2, and 3).

VIRGIN RIVER

(No Action Alternative)



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- The portion of the study area within wilderness is closed to mineral leasing.
- The portion of the study area within the Virgin River scenic withdrawal is open to mineral leasing subject to no surface occupancy stipulations.
- Approved plans of operations are required for locatable mineral development activities, above casual use, in segment 4 in accordance with the Virgin River Area of Critical Environmental Concern.
- Mineral material disposal is prohibited in segment 4 in accordance with the Virgin River Area of Critical Environmental Concern.
- **Segment 4 is open to oil and gas leasing subject to standard terms and conditions.**
- Up to 1,500 acres of land with high riparian values would be acquired. Acquisition would be on a willing seller-willing buyer basis or by exchange.
- Up to 100 acres of public land within the study area could be sold or exchanged.
- An interchange/freeway access overpass could be constructed at Desert Springs.
- A low water crossing or concrete and steel bridge on a 100' right-of-way could be built over the Virgin River between Big Bend and the Peppermill Golf Course in segment 4.
- Existing rights-of-way would be continued.
- The Virgin River corridor would be designated as a special recreation management area identifying recreation as a priority land use.
- Camping would be limited to 14 days.
- Motorized vehicle use is prohibited in the wilderness (segments 1, 2, 3).
- Off-highway vehicle use is limited to designated roads and trails in the non-wilderness portions of the study area.
- A river-running plan would be developed that would specify locations (and potential development) of put-in/take-out access points.
- Any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service.
- Exotic wildlife species and feral livestock would be controlled in the study area in cooperation with the Arizona Game and Fish Department.
- The Recovery Plan for Woundfin Minnow and Virgin River Chub would be implemented. (Remove woundfin and other species from the river, treat the river with piscicide to remove exotic fish species that compete or prey upon endangered native fish, then replace removed woundfin and other native fish.)
- A barrier to prevent the upstream migration of exotic fish could be constructed in segment 4, perhaps in association with the proposed bridge over the Virgin River from Scenic, Arizona, to Interstate Highway 15. A second barrier could also be developed, although the location is not yet known (Recovery Plan for Woundfin Minnow and Virgin River Chub).
- Limit down and dead wood collection to personal campsite use in accordance with the Virgin River Area of Critical Environmental Concern.
- All new proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.

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- In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- Sites evaluated as eligible for the National Register of Historic Places would be avoided by proposed activities.
- If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or site patrols, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- An instream flow study would be completed to determine minimum amounts to protect outstandingly remarkable values.
- Allotments within Desert Wildlife Management Areas on the Beaver Dam and Virgin Slopes would be managed to meet the goals and objectives of the Desert Tortoise Recovery Plan.
- Livestock grazing on the Cedar Wash, Highway, Beaver Dam Slope, Mesquite, and Littlefield Allotments would be prohibited annually from March 15 through June 1 (U.S. Fish and Wildlife Service biological opinion on livestock grazing).

- Livestock grazing use in the Paiute and Beaver Dam Mountains Wilderness Areas would not exceed levels of actual use at the time of wilderness designation.

E. ALTERNATIVES CONSIDERED AND REJECTED

The Arizona Rivers Coalition recommended that segment 4 of the Virgin River study area be designated as Scenic. This was dismissed as an alternative because of the presence of residential structures and agricultural developments and activities in proximity to the river. The presence of these developments affects the eligibility of the segment.

It was recommended that an alternative be developed that excludes private lands along segment 4. This was dismissed as an alternative because the alternatives contain provisions for the Bureau of Land Management to acquire private lands along segment 4 on a willing-seller/willing-buyer basis.

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**TABLE VR-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issue	Recommended alternative (Study River)	All suitable alternative	No action (not suitable)
Outstandingly Remarkable Scenic Values (Seg. 1 & 2)	No adverse impact. Protection under Study River Status. Long-term protection dependent on ensuing Congressional action	No adverse impact. Long-term legislative protection under Wild and Scenic Rivers Act	No adverse impact. No protection under special Wild and Scenic River legislation
Outstandingly Remarkable Fish and Wildlife Habitat Values	No adverse impact. Protection under Study River Status. Long-term protection dependent on ensuing Congressional action	No adverse impact	No adverse impact. No protection under special Wild and Scenic River legislation
Outstandingly Remarkable Aquatic and Riparian Values	Protection under Study River Status. Long-term protection dependent on ensuing Congressional action. Short-term protection or enhancement of water quality could positively impact aquatic and riparian values	Protection or enhancement of water quality could positively impact aquatic and riparian values	Potential adverse impact from lack of legislative protection. Reduction in water quality could adversely impact aquatic and riparian values
Mineral Potential	Minor adverse impact from restriction of patents to mineral estate during study period. Future impacts dependent on ensuing Congressional action	Minor adverse impact from restriction of patents to mineral estate	No adverse impact
Future Water Development and Diversions	No adverse impact during study period. Future impacts dependent on ensuing Congressional action	No adverse impact	No adverse impact

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III. AFFECTED ENVIRONMENT

This section contains information on those resources along the Virgin River that could be affected by the implementation of the alternatives for recommending the Virgin River for inclusion in the Wild and Scenic Rivers System.

Further information is contained in the Arizona Strip District Resource Management Plan (1991), the Shivwits Grazing Environmental Impact Statement (1980), the Arizona Strip Wilderness Study Area Draft Environmental Impact Statement (1982), the Paiute-Beaver Dam Mountains Wilderness Management Plan (1988), the Virgin River-Pakoon Basin Habitat Management Plan (1983), and the Virgin River Wild and Scenic Suitability Determination Report (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Virgin River study area possesses scenic, geologic, fish and wildlife habitat, and aquatic and riparian outstandingly remarkable values.

The Virgin River has outstandingly remarkable scenic values in segments 1, 2, and 3. Rugged mountains, rocky canyons, and imposing cliff faces provide exceptional opportunities for sightseeing and photography. Approximately 19 river miles (segments 1 and 2) provide outstanding scenery in the spectacular Virgin River Gorge. At one point the gorge is over 2,000 feet deep. Almost 10 million travelers per year can view the river as it flows next to Interstate Highway 15 in segments 2 and 3.

The Virgin River Gorge divides the Beaver Dam Mountains to the north from the Virgin Mountains to the south. The gorge cut by the river reveals 300 million years of geologic history. Colorful canyon walls are composed, from top to bottom, of Kaibab and Toroweap limestone, Quantoweap sandstone, Pakoon dolomite, and river terrace gravels. The recreation area near the middle of the gorge is

in a geologic graben that has been dropped down by faulting on both sides. Other faults can be seen throughout the gorge. The gorge and surrounding mountains are in a unique transition zone between the Colorado Plateau and the Basin and Range physiographic provinces.

The study area also contains outstandingly remarkable fish and wildlife habitat values. Many wildlife species rely upon the Virgin River and associated riparian areas for habitat. The river supports a variety of native fish, including the roundfin minnow (Plagiopterus argentissimus), federally-listed as endangered, the Virgin River chub (Gila seminuda), federally-listed as endangered, and the Virgin spinedace (Lepidomeda mollispinus), proposed for listing as threatened under the Endangered Species Act.

Other special status species include bald eagles (Haliaeetus leucocephalus) and golden eagles (Aquila chrysaetos), peregrine falcons (Falco peregrinus anatum), blackhawks (Buteogallus anthracinus), and leopard frogs (Rana pipiens). The riparian habitat is potentially home for southwestern willow flycatchers (Empidonax trillii extimus, proposed for listing as endangered), western snowy plovers (Charadrius alexandrinus), and long-billed curlews (Numenius americanus).

Riparian communities along the river are dominated by salt cedar with narrow corridors of native willows, ash (Fraxinus sp.), bulrushes (Scirpus sp.), cattails (Typha latifolia), and cottonwoods. Other vegetation includes rushes (Juncus sp.), sedges (Carex sp.), and a variety of forbs and grasses.

Mature cottonwood and willow galleries occur along tributaries such as Beaver Dam Wash and at springs scattered along the river. This riparian corridor runs through an otherwise arid region and supports a variety of wildlife. Typically, the diversity of plant and animal

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species is greater around the riparian zone and river than in the surrounding uplands.

B. MINERALS

The Paiute-Beaver Dam Mountain Wilderness Areas have been withdrawn from locatable mineral entry and are closed to oil and gas leasing and mineral material sales.

The area within 400 feet of the Interstate Highway 15 is not within wilderness, but is covered by the Virgin River scenic withdrawal, where minerals management is identical to that within wilderness, except that mineral leasing is allowed with no surface occupancy stipulations.

Mining in the area outside of wilderness (and the withdrawal) but within the Virgin River Area of Critical Environmental Concern (segment 4) requires an approved plan of operation for locatable mineral activity above casual use. Any plan of operation would contain mitigation to minimize impacts to riparian, scenic, and recreation values and to avoid impacts to endangered fish species.

There are no oil or gas leases within the study area. Any oil and gas lease in segment 4 would carry a no surface occupancy stipulation along with standard stipulations.

There has been little mining activity in segment 4 (one notice was received in 1992). There are 11 mining claims, all in segment 4. Mineral potential is rated as moderate for placer gold and fluid minerals (oil and gas). The U.S. Geological Survey (1986) indicates that the area has sparse or no known mineral deposits, but geologic terrain is favorable or possible for the occurrence of copper and uranium. No increase in activity is expected to occur.

The entire area of critical environmental concern is closed to mineral material disposal.

C. LANDS

Interstate Highway 15 travels adjacent to or

over the river through the narrow canyon in segments 2 and 3. In segment 4, dirt roads approach the water's edge; some ford the river. Small electrical/telephone transmission lines cross the river in two places in segment 4. Residents of the rural unincorporated community of Scenic, Arizona have applied to Mohave County for a new road and bridge across segment 4 between Big Bend and the Peppermill Golf Course.

Private and commercial development is expected to occur near segment 4. There are 1,632 acres of private land within the study area. Approximately 100 acres of public land within the river area have been identified as suitable for disposal through sale or exchange (Township 40 North, Range 15 West, Section 4 - 30 acres; Township 40 North, Range 16 West, Section 35 - 40 acres; Hughes exchange - 20 acres).

The lands in and around segments 1, 2, and 3 are public lands that have been federally designated as wilderness.

Growth of Littlefield and Beaver Dam, Arizona and the surrounding rural area is continuing to place demands on public lands and natural resources. New homes are being constructed on private lands within the study area.

Accompanying facilities such as roads and utility lines are being built on private and public lands in and around segment 4.

Residents of the unincorporated area known as Scenic, Arizona have approached the Bureau for a road right-of-way across the Virgin Mountain slopes that would provide access from Scenic to Interstate Highway 15 at the unincorporated town of Desert Springs. That area is critical habitat for the desert tortoise, a federally-listed species. As an alternative, the Bureau and Mohave County are investigating the possibility of crossing the Virgin River downstream from Big Bend, in segment 4. This could be a low water crossing or concrete and steel structure on a 100' right-of-way.

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The residents of Desert Springs are pursuing the possibility of constructing a freeway access/overpass to replace the existing farm road exit along Interstate Highway 15. This would be either directly adjacent to or within the study area (segment 4), depending on the location.

D. RECREATION

The Virgin River study area supports a variety of activities associated with the river, wetlands, and steep canyons, including hiking, river rafting, kayaking, swimming, fishing, wildlife and bird-watching, hunting, photography, camping, rockclimbing, and nature study.

Although these activities occur throughout the study area, many are localized at the Virgin River campground, the Beaver Dam/Virgin River confluence, and springs and pools under the Interstate Highway 15 bridge ("Little Jamaica"), on private land below the confluence.

Rugged mountains, rocky canyons, and imposing cliff faces provide exceptional opportunities for sightseeing and photography. Approximately 19 river miles (segments 1 and 2) provide outstanding scenery in the spectacular Virgin River Gorge. At one point the gorge is over 2,000 feet deep. Almost 10 million travelers per year can view the river as it flows next to Interstate Highway 15 in segments 2 and 3.

The recreation area near the middle of the gorge is in a geologic graben that has dropped down by faulting on both sides. Other faults can be seen throughout the gorge. The gorge and surrounding mountains are in a unique transition zone between the Colorado Plateau and the Basin and Range physiographic provinces.

Boating on the river is typically limited to the spring when snowmelt occurs in the mountains of the headwaters, or immediately following a period of heavy precipitation. Kayaks, canoes, and small rafts are used by local and regional

white-water boaters, with enthusiasts from Phoenix, Las Vegas, Salt Lake City, and beyond. Current estimates are 50 to 300 boaters per year, although these numbers increased in 1993 due to high snowpack and precipitation during an extended period of high flows. (Five hundred cubic feet per second is considered the minimum necessary for river-running.) A commercial boating operation received a special recreation use permit in 1993. Put-in/take-out points for boaters have been identified in segment 4.

The Bureau of Land Management operates a developed campground at the Virgin River Canyon Recreation Area along the river, adjacent to a rest area operated by the Arizona Department of Transportation. Access for hiking and river-based activities is available here. A small recreation and interpretive site is planned for the Virgin River/Beaver Dam confluence, consisting of a parking area, picnic tables, and interpretive signs.

Technical rockclimbing occurs on the steep cliffs in the narrowest part of the gorge, primarily in the fall, winter, and spring when temperatures are lower.

Access to segment 1 is available only by foot, horseback, or floating down the river from Utah. Legal access to segments 2 and 3 in the gorge is available only at the Virgin River Campground. Access to segment 4 is limited by private lands.

E. FISH AND WILDLIFE HABITAT

Many wildlife species rely upon the Virgin River and associated riparian areas for habitat. The river supports a variety of fishes, including two listed as threatened or endangered and another candidate for listing. Other special status species include bald and golden eagles, peregrine falcons, and leopard frogs.

The riparian habitat is potentially home for willow flycatchers, western snowy plovers, and long-billed curlews. Riparian habitat supports a

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higher density and diversity of wildlife than the surrounding upland vegetation. Riparian features are important for neotropical migratory birds, birds of prey, upland game birds, native fish, amphibians, and mammals.

Desert bighorn (*Ovis canadensis*), mule deer (*Odocoileus hemionus*), desert tortoises (*Gopherus agassizii*, federally-listed as threatened), and other species live all or part of their lives in the study area. The U.S. Fish and Wildlife Service has designated desert tortoise habitat adjacent to the study area as critical habitat.

The Arizona Strip Resource Management Plan contains decisions that are designed to protect threatened and endangered wildlife species and their habitat. Examples include the provision for seasonal restrictions on activities in tortoise habitat, initiation of instream flow studies to determine needs for wildlife, participation in the woundfin recovery team, and inventory and monitoring efforts for woundfin, peregrine falcons, desert tortoises, and other species.

The use of piscicide to remove populations of exotic (non-native) fish that either compete with or prey upon threatened or endangered native fish has been accompanied by the construction of barriers across the river in Utah. Additional barriers are being proposed in Arizona (perhaps in association with the proposed Scenic/Interstate Highway 15 bridge) by the woundfin recovery team. These barriers prevent the recolonization of the upper river by exotics after the use of piscicides. Native fish that are reintroduced into the river above the barriers are then free from competition or predation by exotic fish species that would normally be able to move upstream from Lake Mead.

In 1993 the Bureau of Land Management issued decisions that prohibit livestock grazing on the Cedar Wash, Highway, Beaver Dam Slope, Mesquite, and Littlefield Allotments (and other allotments not in this study area) from March 15 through June 1 of every year to protect desert tortoises. An appeal from these decisions was

filed with the Department of Interior Board of Land Appeals in 1993 by the affected grazing permittees. The appeal currently has not been resolved.

The draft Desert Tortoise Recovery Plan (1993) calls for the establishment of Desert Wildlife Management Areas on the Beaver Dam and Virgin Slopes. Livestock grazing could be restricted or eliminated in five of the eight allotments.

F. VEGETATION

Riparian communities along the river are dominated by salt cedar with narrow corridors of native willows, ash (*Fraxinus sp.*), bulrushes (*Scirpus sp.*), cattails (*Typha latifolia*), and cottonwoods. Other vegetation includes rushes (*Juncus sp.*), sedges (*Carex sp.*), and a variety of forbs and grasses.

Mature cottonwood and willow galleries occur along tributaries such as Beaver Dam Wash and at springs scattered along the river. This riparian corridor runs through an otherwise arid region and supports a variety of wildlife. Typically, the diversity of plant and animal species is greater around the riparian zone and river than in the surrounding uplands.

Upland vegetation is creosote (*Larrea tridentata*), Joshua tree (*Yucca brevifolia*), grasses, forbs, and shrubs typical of the Mojave Desertscrub biotic community.

G. CULTURAL RESOURCES

Significant cultural properties are present along or adjacent to the study area reflecting more than 11,000 years of human occupation and use. Cultural resource features along the river include rock art, agricultural features, storage cists, caves, rock shelters, pueblos, artifact scatters, homesteads, and ranches. While these cultural properties exhibit a challenge to management agencies, they also offer great opportunities for study, education, and interpretation.

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H. WATER RESOURCES

The Virgin River in Arizona is considered to be a perennial stream although it sometimes goes dry in some reaches during the hottest summer months. High flows typically occur during the late winter/spring runoff period and because of summer thunderstorms. The State of Arizona has not made a determination of navigability for the Virgin. The river is not on the list of priority streams identified for preliminary evaluation.

The average rate of flow is 236 cubic feet per second (cfs) based on 62 years of records from a U.S. Geologic Survey gauge at Littlefield. As a result of the Quail Creek Dam (St George, Utah) failure in 1989 a flow of approximately 61,000 cfs was recorded. Scouring of the riverbed as a result of high flows continuously affects channel morphology and riparian ecosystems.

The Virgin River generally has poor water quality, the result of high turbidity and salinity, and agricultural, residential, and commercial uses upstream. The water appears muddy for most of the year. Sediment loads are extremely high, reducing the feasibility of impoundments on the river. Tests on water samples taken from the gorge indicated high levels of fecal coliform bacteria.

The Bureau of Land Management has filed for an instream flow water right with the Arizona Department of Water Resources subject to state law and independent of Wild and Scenic River Act procedures. The filing may be adjusted based on the results of a comprehensive instream flow incremental modeling study. Recreation, fish, and wildlife are recognized as beneficial uses under the state system. The Bureau of Land Management has no plans to file for an additional instream flow. No federal reserved water right was asserted based on wilderness designation.

Water developments and rights within the river area are associated with livestock, agricultural, and domestic use. There are two water wells

within the river area; one at the rest area and campground, the other abandoned. A diversion approximately three miles upstream from the Nevada-Arizona state line supplies water for agriculture to the Virgin Valley near Mesquite, Nevada.

Competition for water in the three state area is rapidly increasing. Communities in southern Utah are actively exploring ways to obtain water to support rapidly growing populations. Water from Beaver Dam Wash is being sought by interests in Nevada, Arizona, and Utah. The Las Vegas Valley Water District has filed for water rights from the lower Virgin River for use in the rapidly expanding Las Vegas valley. The existing and future demands far exceed the river's supply.

Downstream from the study area water is used for recreation, agriculture, fish, wildlife, residential, and commercial purposes. Virgin River water is being sought for various purposes in the Virgin Valley and Las Vegas valley.

Upstream from the study area, water rights have been obtained for livestock, agricultural, domestic, and commercial (industrial) uses. Several new water development projects are being proposed to support the continuing growth of southwestern Utah.

The Bureau of Reclamation and Las Vegas Valley Water District are implementing the Lower Virgin River Project, which would divert water from the Virgin near Mesquite for use in Nevada. One possible diversion point is approximately three miles upstream from the stateline, within the study area.

The Washington County Water Conservancy District (1992) predicts the population and the county's water needs would triple by 2010.

The Bureau of Reclamation (1993) has calculated the amount of water currently being used from the Virgin River in Arizona and the projected usage in 50 years (in acre-feet):

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Type of Use	1990	2040
Municipal and Industrial	2,341	10,786
Irrigation	6,440	6,440

The Washington County Water Conservancy District (1993) stated "The margin of reserve between supply and demand for water has diminished to the point that all water needs cannot be met for an increasing range of hydrologic events. Prolonged droughts, protection of endangered and threatened species, preservation and enhancement of wetlands, and recreational uses have further burdened existing developed water resources. The result is growing conflicts between economic, quality of life, and environmental issues. Resolving conflicts by adopting trade-offs among users reduces benefits and results in loss of economic growth and a lack of environmental improvements or a reduction in the quality of life."

I. LIVESTOCK GRAZING

The Virgin River flows through seven cattle and one sheep grazing allotments in the study area. They are the: Littlefield Community (season long grazing), Cedar Wash (less intensive), Highway (deferred), Beaver Dam Slope

(deferred), Sullivan Canyon (winter use), Mountain Sheep (winter use), Lambing (winter use), and Apex (winter sheep use, administered by the Bureau of Land Management Dixie Resource Area, Utah).

Grazing occurs primarily during the winter and spring. The river is not a base water source for livestock operations, but is used by livestock. Three allotment boundary fences cross the river within the study area. One fence is in segment 1, and two in segment 3. These fences typically wash out during high flows but are rebuilt each year as flows recede or as grazing resumes.

In 1993 the Bureau of Land Management issued decisions that prohibit livestock grazing on the Cedar Wash, Highway, Beaver Dam Slope, Mesquite, and Littlefield Allotments (and other allotments not in this study area) from March 15 through June 1 of every year to protect desert tortoises. An appeal from these decisions was filed with the Department of Interior Board of Land Appeals in 1993 by the affected grazing permittees. The appeal currently has not been resolved.

The draft Desert Tortoise Recovery Plan (1993) calls for the establishment of Desert Wildlife Management Areas on the Beaver Dam and Virgin Slopes. Livestock grazing could be restricted or eliminated in five of the eight allotments.

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IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Virgin River study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act of 1969 for any Congressionally designated wild and scenic river.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres. The typical moderately sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderately sized mine. Large mining operations would be those involving more than five acres and subject to approval of a Bureau of Land Management approved plan of operation.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative determines the Virgin River study area to be suitable and recommends its designation as a Study River in accordance with provisions in Section 5(a) of the National Wild and Scenic Rivers Act. Implementation of the recommended alternative would continue the protective status associated with the eligibility findings defined in the Arizona Strip District Resource Management Plan.

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Impacts on the Outstandingly Remarkable Values

Scenic quality, fish and wildlife habitat, and aquatic and riparian values have been identified as outstandingly remarkable values in the Virgin River study area.

Under the recommended alternative, the Virgin River study area would not be recommended for designation at this time and its outstandingly remarkable values would not receive long-term legislative protection under the Wild and Scenic Rivers Act. The outstandingly remarkable values would be subject to the effects of actions allowable under the management of the wilderness area and area of critical environmental concern, as well as continued protection associated with the eligibility findings.

Impacts on Outstandingly Remarkable Scenic values

Rugged mountains, rocky canyons, and imposing cliff faces provide exceptional opportunities for sightseeing and photography. Approximately 19 river miles (segments 1, 2, and 3) provide outstanding scenery in the spectacular Virgin River Gorge. At one point the gorge is over 2,000 feet deep. Almost 10 million travelers per year view the river as it flows next to Interstate Highway 15 in segments 2 and 3.

The scenic values are identified with the wilderness area and are protected through actions implemented through the Paiute-Beaver Dam Mountains Wilderness Management Plan (1988). These include prohibition of new mineral entry, prohibition of motorized travel, efforts to acquire private inholdings, and road closures.

• Conclusion

Ongoing management actions under the implementation of the recommended alternative

would have no adverse impact on the outstandingly remarkable scenic values.

For the period of time that the study river protection is in effect, there would be no impact from implementation of the recommended alternative. Impacts after that period would depend on the ensuing Congressional designation.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat values

Many wildlife species rely upon the Virgin River and associated riparian areas for habitat. The river supports a variety of fishes, including two listed as threatened or endangered and another as a candidate for listing. Other special status species include bald and golden eagles, peregrine falcons, and leopard frogs. Parts of segments 1, 2, and 3 are designated as critical habitat for the Virgin River chub.

The riparian habitat is potentially home for willow flycatchers, western snowy plovers, and long-billed curlews. Riparian habitat supports a higher density and diversity of wildlife than the surrounding upland vegetation. Riparian features are important for neotropical migratory birds, birds of prey, upland game birds, native fish, amphibians, and mammals.

Desert bighorn, mule deer, desert tortoises, and other species live all or part of their lives in the study area. The U.S. Fish and Wildlife Service has designated desert tortoise habitat adjacent to the study area as critical habitat.

Any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service. The Bureau and the U.S. Fish and Wildlife Service would develop stipulations that would protect these species. In addition, exotic wildlife species and feral livestock would be controlled in cooperation with the Arizona Game and Fish Department.

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• Conclusion

Ongoing management actions under the implementation of the recommended alternative would have no adverse impact on the outstandingly remarkable fish and wildlife habitat values.

For the period of time that study river protection is in effect, there would be no adverse impact from implementation of the recommended alternative. Impacts after that period would depend on the ensuing Congressional designation.

Impacts on Outstandingly Remarkable Aquatic and Riparian Values

Riparian communities along the river are dominated by salt cedar with narrow corridors of native willows, ash, bulrushes, cattails, and cottonwoods. Other vegetation includes rushes, sedges, and a variety of forbs and grasses.

Mature cottonwood and willow galleries occur along tributaries such as Beaver Dam Wash and at springs scattered along the river. This riparian corridor runs through an otherwise arid region and supports a variety of wildlife. Typically, the diversity of plant and animal species is greater around the riparian zone and river than in the surrounding uplands.

Down and dead wood collection would be limited to personal campsite use in accordance with the Virgin River Area of Critical Environmental Concern. Other management actions protecting the outstandingly remarkable aquatic and riparian values include efforts to acquire lands with high riparian values in accordance with the Virgin River Area of Critical Environmental Concern. Any acquisition would be on a willing seller-willing buyer basis or by exchange.

In addition, off-highway vehicle use would be limited to designated roads and trails in the non-wilderness portions of the study area.

• Conclusion

Ongoing management actions under implementation of the recommended alternative would have no adverse impact on the outstandingly remarkable aquatic and riparian values.

For the period of time that study river protection is in effect, there would be no impact from the selection of the recommended alternative. Impacts after that period would depend on any ensuing Congressional designation.

Impacts on Mineral Development

The area within wilderness is withdrawn from locatable mineral entry. Activities, above the level of casual use, occurring outside of wilderness but within the Virgin River study area would require approved plans of operations. Oil and gas potential is low. Mineral potential is low. The entire river study area is closed to mineral material disposals in accordance with the wilderness management plan and management prescriptions for the area of critical environmental concern.

• Conclusion

There would be a minor adverse impact on minerals development from the implementation of the recommended alternative from the restriction of mining patents to the mineral estate.

Impacts on Water Development and Diversions

Water developments and rights within the river area are associated with livestock, agricultural, and domestic use. There are two water wells within the river area: one at the rest area and campground, the other abandoned. A diversion approximately three miles upstream from the Nevada-Arizona stateline supplies water for agriculture to the Virgin Valley near Mesquite, Nevada.

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The average rate of flow is 236 cfs based on 62 years of records from a U.S. Geologic Survey gauge at Littlefield. As a result of the Quail Creek Dam (St George, Utah) failure in 1989, a flow of approximately 61,000 cfs was recorded. Scouring of the riverbed as a result of high flows continuously affects channel morphology and riparian ecosystems.

Competition for water in the three state area (Utah, Arizona, Nevada) is rapidly increasing. Water from Beaver Dam Wash is being sought by interests in Nevada, Arizona, and Utah.

Downstream from the study area water is used for recreation, agriculture, fish, wildlife, residential, and commercial purposes. Virgin River water is being sought for various purposes in the Virgin Valley and Las Vegas Valley.

The Las Vegas Valley Water District has filed for water rights from the lower Virgin River for use in the rapidly expanding Las Vegas Valley. The Bureau of Reclamation and Las Vegas Valley Water District are implementing the Lower Virgin River Project, which would divert water from the Virgin near Mesquite for use in Nevada. One possible diversion point is approximately three miles upstream from the stateline, within the study area.

Upstream from the study area water rights have been obtained for livestock, agricultural, domestic, and commercial (industrial) uses. Several new water development projects are being proposed to support the continuing growth of southwestern Utah.

Communities in southern Utah are actively exploring ways to obtain water to support rapidly growing populations. The Washington County Water Conservancy District (1992) predicts that the population and the county's water needs, will triple by 2010.

The existing and future demands far exceed the river's supply. The Washington County Water Conservancy District (1993) stated in part "The margin of reserve between supply and demand

for water has diminished to the point that all water needs cannot be met for an increasing range of hydrologic events... protection of endangered and threatened species, preservation and enhancement of wetlands, and recreational uses ... The result is growing conflicts between economic, quality of life, and environmental issues... "

The Bureau of Land Management has filed for instream flow water rights with the Arizona Department of Water Resources subject to state appropriated water laws and independent of Wild and Scenic River Act procedures. The filings may be adjusted based on the results of a comprehensive instream flow incremental modeling study. Recreation, fish, and wildlife are recognized as beneficial uses under the state system. The Bureau of Land Management has no plans to file for additional instream flow. No federal reserve water right from wilderness designation was filed.

No dams or impoundments would be allowed in the Wild segments during the study period. None are planned, nor are any likely to be proposed. These segments are within designated wilderness. The Recreational classification of Segment 4 would not impact any future water developments during the period of time the Study River designation is in effect.

• Conclusion

For the period of time the study river protection is in effect there would be no impact on future water development and diversions from the selection of the recommended alternative. Impacts after that period would depend on any ensuing Congressional designation.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future

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actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Virgin River study area.

Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with the Paiute and Beaver Dam Mountains Wilderness Area and the Virgin River Area of Critical Environmental Concern.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of these areas.

Irreversible and Irretrievable Commitments of Resources

Under the recommended alternative, mineral entry would not be allowed, and resource management activities would be subject to the Paiute-Beaver Dam Mountains Wilderness Management Plan and Virgin River Area of Critical Environmental Concern.

Wilderness areas are created by legislation and are subject to change. Areas of critical environmental concern are created by administrative decisions and are subject to change.

There are no irreversible or irretrievable commitments of resources.

Unavoidable Adverse Effects

Implementation of the recommended alternative would not lead to unavoidable adverse impacts

due to the restrictions on activities from the Paiute and Beaver Dam Mountains Wilderness Area and the Virgin River Area of Critical Environmental Concern.

Short-Term Uses of the Environment Versus Long-Term Productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE

The all suitable alternative determines the study area as suitable and recommends it for designation as a wild and scenic river with segment 1 as Wild, segments 2 and 3 as Scenic, and segment 4 as Recreational.

Impacts on Outstandingly Remarkable Scenic values

Rugged mountains, rocky canyons, and imposing cliff faces provide exceptional opportunities for sightseeing and photography. At one point the Gorge is over 2,000 feet deep. Approximately 19 river miles (segments 1, 2, and 3) provide outstanding scenery in the spectacular Virgin River gorge. Almost 10 million travelers per year view the river as it flows next to Interstate Highway 15 in segments 2 and 3.

Under the all suitable alternative, wild and scenic river management actions would occur. These actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands. These actions would provide protection to the outstandingly remarkable scenic values by retaining the waterway in the condition it was when those values were identified.

New transmission lines, natural gas lines and water lines would be discouraged. While this

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

does not provide the same protection as prohibition would, it encourages applicants to consider other routes. The action would provide protection to the outstandingly remarkable scenic values by diminishing the chance for impairment of the scenic vistas by transmission line intrusions.

In segments outside of wilderness, patents would be restricted to the mineral estate. This would ensure federal protection of the surface estate after the terms of the lease have been fulfilled. This would protect the outstandingly remarkable scenic values on a long-term basis by removing any possibility of a permanent conflict with minerals operations.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, actions implemented through the Palute-Beaver Dam Mountains Wilderness Management Plan (1988) include prohibition of mineral entry, prohibition of motorized travel, efforts to acquire private inholdings, and road closures.

• Conclusion

Implementation of the all suitable alternative would provide long-term legislative protection for the outstandingly remarkable scenic values.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Many wildlife species rely upon the Virgin River and associated riparian areas for habitat. The river supports a variety of fishes, including two listed as threatened or endangered and another candidate for listing. Other special status species include bald and golden eagles, peregrine falcons, blackhawks, and leopard frogs.

The riparian habitat is potentially home for willow flycatchers, western snowy plovers, and long-billed curlews. Riparian habitat supports a higher density and diversity of wildlife than the

surrounding upland vegetation. Riparian features are important for neotropical migratory birds, birds of prey, upland game birds, native fish, amphibians, and mammals.

Desert bighorn, mule deer, desert tortoises, and other species live all or part of their lives in the study area. The U.S. Fish and Wildlife Service has designated desert tortoise habitat adjacent to the study area as critical habitat.

Under the all suitable alternative, wild and scenic river management actions would occur. These actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands. They would provide protection to the outstandingly remarkable fish and wildlife habitat values by retaining the waterway in the condition it was when those values were identified.

In segments outside of wilderness, patents would be restricted to the mineral estate. This would ensure federal protection of the surface estate after the terms of the lease have been fulfilled. This would protect the outstandingly remarkable fish and wildlife habitat values on a long-term basis by removing any possibility of a permanent conflict with minerals operations.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service. The Bureau and the U.S. Fish and Wildlife Service would develop stipulations that would protect these species. In addition, exotic wildlife species and feral livestock would be controlled in cooperation with the Arizona Game and Fish Department.

• Conclusion

Implementation of the all suitable alternative would provide long-term legislative protection

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

for the outstandingly remarkable fish and wildlife habitat values.

Impacts on Outstandingly Remarkable Aquatic and Riparian Values

Riparian communities along the river are dominated by salt cedar with narrow corridors of native willows, ash, bulrushes, cattails, and cottonwoods. Other vegetation includes rushes, sedges, and a variety of forbs and grasses.

Mature cottonwood and willow galleries occur along tributaries such as Beaver Dam Wash and at springs scattered along the river. This riparian corridor runs through an otherwise arid region and supports a variety of wildlife. Typically, the diversity of plant and animal species is greater around the riparian zone and river than in the surrounding uplands.

Under the all suitable alternative, wild and scenic river management actions would occur. These actions would prohibit construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands. They would provide protection to the outstandingly aquatic and hydrologic values by retaining the waterway in the condition it was when these values were identified.

In segments outside of wilderness, patents would be restricted to the mineral estate. This would ensure federal protection of the surface estate after the terms of the lease have been fulfilled. This would protect the outstandingly remarkable aquatic and hydrologic values on a long-term basis by removing any possibility of a permanent conflict with minerals operations.

Additional protection for the outstandingly remarkable fish and wildlife habitat values would be supplied by the ongoing management activities described in Chapter II. For example, down and dead wood collection would be limited to personal campsite use in accordance with the Virgin River Area of Critical Environmental Concern.

Other management actions protecting the outstandingly remarkable aquatic and riparian values include efforts to acquire lands with high riparian values in accordance with the Virgin River Area of Critical Environmental Concern. Any acquisition would be on a willing seller-willing buyer basis or by exchange. Off-highway vehicle use would be limited to designated roads and trails in the non wilderness portions of the study area.

• Conclusion

Implementation of the all suitable alternative would provide long-term legislative protection for the outstandingly remarkable aquatic and hydrologic values.

Impacts on Mineral Development

The area within the Paiute and Beaver Dam Mountains Wilderness has been withdrawn from locatable mineral entry and is closed to oil and gas development and mineral material sales.

Mineral potential is rated as moderate for placer gold and fluid minerals (oil and gas). The U.S. Geological Survey (1986) indicates that the area has sparse or no known mineral deposits, but geologic terrain is favorable or possible for the occurrence of copper and uranium.

Under the all suitable alternative, wild and scenic river management actions would occur. In segments outside of wilderness patents would be restricted to the mineral estate. This would ensure federal protection of the surface estate after mining has ceased. On the other hand, while it may present some difficulties for operations that require outside financing, the restriction of patents to the mineral estate would not be an adverse impact of major consequence.

The ongoing management actions described in Chapter II also affect mineral development. Mining activities, above the level of casual use, in the area outside the wilderness but within the Virgin River Area of Critical Environmental

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

Concern (segment 4) require an approved plan of operations. Any plan of operations would contain mitigation to minimize impacts to riparian, scenic, and recreation values and to avoid impacts to endangered fish species. Any oil and gas lease in segment 4 would carry a no surface occupancy stipulation along with standard stipulations.

The entire Virgin River Area of Critical Environmental Concern is closed to mineral material disposal.

According to the minerals scenario it is reasonable to anticipate that two small mines covering less than nine acres would be started in the next 20 years. These two mines would have a projected three miles of access roads and employ 8 to 10 people.

• Conclusion

There would be adverse impacts to minerals development from implementation of the all suitable alternative. Mineral entry, oil and gas leasing, and mineral material sales are already prohibited in the Wild segments by wilderness provisions. Approval for plans of operations and the prohibition of mineral disposals in the riparian area are already required by the Virgin River Area of Critical Environmental Concern. There would be restrictions under the all suitable alternative that would limit patenting mining claims outside of wilderness to the mineral estate.

Impacts on Water Development and Diversions

Water developments and rights within the river area are associated with livestock, agricultural, and domestic use. There are two water wells within the river area; one at the rest area/campground, the other abandoned. A diversion approximately three miles upstream from the Nevada-Arizona stateline supplies water for agriculture to the Virgin Valley near Mesquite, Nevada would not be affected by the selection of this alternative.

The average rate of flow is 236 cfs based on 62 years of records from a U.S. Geologic Survey gauge at Littlefield, Arizona. As a result of the Quail Creek (St George, Utah) Dam failure in 1989 a flow of approximately 61,000 cfs was recorded. Scouring of the riverbed as a result of high flows continuously affects channel morphology and riparian ecosystems.

Competition for water in the three state area (Utah, Arizona, Nevada) is rapidly increasing. Water from Beaver Dam Wash is being sought by interests in Nevada, Arizona, and Utah.

Downstream from the study area water is used for recreation, agriculture, fish, wildlife, residential, and commercial purposes. Virgin River water is being sought for various purposes in the Virgin Valley and Las Vegas Valley.

The Las Vegas Valley Water District has filed for water rights from the lower Virgin River for use in the rapidly expanding Las Vegas Valley. The Bureau of Reclamation and Las Vegas Valley Water District are implementing the Lower Virgin River Project, which would divert water from the Virgin near Mesquite for use in Nevada. One possible diversion point is approximately three miles upstream from the stateline, within the study area.

Upstream from the study area water rights have been obtained for livestock, agricultural, domestic, and commercial (industrial) uses. Several new water development projects are being proposed to support the continuing growth of southwestern Utah.

Communities in southern Utah are exploring ways to obtain water to support rapidly growing populations. The Washington County Water Conservancy District (1992) predicts that the

population and the county's water needs will triple by 2010.

The existing and future demands far exceed the river's supply. The Washington County Water Conservancy District (1993) stated in part "The

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

margin of reserve between supply and demand for water has diminished to the point that all water needs cannot be met for an increasing range of hydrologic events... protection of endangered and threatened species, preservation and enhancement of wetlands, and recreational uses ... The result is growing conflicts between economic, quality of life, and environmental issues... "

The Bureau of Land Management has filed for instream flow water rights with the Arizona Department of Water Resources subject to state appropriated water laws and independent of Wild and Scenic River Act procedures. The fillings may be adjusted based on the results of a comprehensive instream flow incremental modeling study.

The Bureau of Land Management would not file for additional instream flow unless the instream flow study indicated additional amounts were needed to provide protection to the outstandingly remarkable values.

Currently there is no interstate compact or agreement for allocation of Virgin River water. Utah is under no legal obligation to release water into Arizona.

Designation of the Virgin River as a component of the National Wild and Scenic Rivers System could affect negotiations essential to developing any interstate water compact.

• Conclusion

There would be no adverse impacts on future water development and diversions from implementation of the all suitable alternative.

D. IMPACTS FROM IMPLEMENTING THE NO ACTION ALTERNATIVE

The no action alternative determines that the Virgin River study area is nonsuitable and should not be recommended for inclusion in the National Wild and Scenic Rivers System. Implementation of the no action alternative

would rescind any protective status associated with the eligibility findings. The study area would be placed under applicable multiple use management prescriptions defined in the Arizona Strip District Resource Management Plan and the Paiute-Beaver Dam Wilderness Area Management Plan.

Scenic quality, fish and wildlife habitat, and aquatic and riparian values have been identified as outstandingly remarkable values in the Virgin River study area. The outstandingly remarkable scenic quality, fish and wildlife habitat, and aquatic and riparian values would continue to receive protection from management of the Paiute and Beaver Dam Mountains Wilderness Area, the Arizona Strip District Resource Management Plan, and the Virgin River Area of Critical Environmental Concern.

Impacts on Outstandingly Remarkable Scenic Values

Rugged mountains, rocky canyons, and imposing cliff faces provide exceptional opportunities for sightseeing and photography. Approximately 19 river miles (segments 1, 2, and 3) provide outstanding scenery in the spectacular Virgin River Gorge. At one point the gorge is over 2,000 feet deep. Almost 10 million travelers per year view the river as it flows next to Interstate Highway 15 in segments 2 and 3.

The scenic values are identified with the wilderness area and are protected through actions implemented through the wilderness management plan (1988). These include prohibition of mineral entry, prohibition of motorized travel, efforts to acquire private inholdings, and road closures.

• Conclusion

Under the no action alternative, outstandingly remarkable scenic values would not receive long-term protection under the Wild and Scenic Rivers Act. However, ongoing management actions would continue to protect these values.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values

Many wildlife species rely upon the Virgin River and associated riparian areas for habitat. The river supports a variety of fishes, including two listed as threatened or endangered and another candidate for listing. Other special status species include bald and golden eagles, peregrine falcons, and leopard frogs. Parts of segments 1, 2, and 3 are designated as critical habitat for the Virgin River Chub.

The riparian habitat is potentially home for willow flycatchers, western snowy plovers, and long-billed curlews. Riparian habitat supports a higher density and diversity of wildlife than the surrounding upland vegetation. Riparian features are important for neotropical migratory birds, birds of prey, upland game birds, native fish, amphibians, and mammals.

Desert bighorn, mule deer, desert tortoises, and other species live all or part of their lives in the study area. The U.S. Fish and Wildlife Service has designated desert tortoise habitat adjacent to the study area as critical habitat.

Any action that would affect any threatened or endangered species would require consultation with the U.S. Fish and Wildlife Service. The Bureau and the U.S. Fish and Wildlife Service would develop stipulations that would protect these species. In addition, exotic wildlife species and feral livestock would be controlled in cooperation with the Arizona Game and Fish Department.

• Conclusion

Under the no action alternative, outstandingly remarkable fish and wildlife habitat values would not receive long-term protection under the Wild and Scenic Rivers Act. However, ongoing management actions would continue to protect these values.

Impacts on Outstandingly Remarkable Aquatic and Riparian Values

Riparian communities along the river are dominated by salt cedar with narrow corridors of native willows, ash, bulrushes, cattails, and cottonwoods. Other vegetation includes rushes, sedges, and a variety of forbs and grasses.

Mature cottonwood and willow galleries occur along tributaries such as Beaver Dam Wash and at springs scattered along the river. This riparian corridor runs through an otherwise arid region and supports a variety of wildlife. Typically, the diversity of plant and animal species is greater around the riparian zone and river than in the surrounding uplands.

Down and dead wood collection would be limited to personal campsite use in accordance with the Virgin River Area of Critical Environmental Concern.

Other management actions protecting the outstandingly remarkable aquatic and riparian values include efforts to acquire lands with high riparian values in accordance with the Virgin River Area of Critical Environmental Concern. Any acquisition would be on a willing seller-willing buyer basis or by exchange. Off-highway vehicle use would be limited to designated roads and trails in the non-wilderness portions of the study area.

A reduction in water levels or quality could have adverse impacts on this outstandingly remarkable value.

• Conclusion

Under the no action alternative, outstandingly remarkable aquatic and riparian habitat values would not receive long-term protection under the Wild and Scenic Rivers Act. Due to a continuing decline in water levels or quantity, ongoing management actions would not provide adequate protection for these values.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

Impacts on Mineral Development

The area within the Palute and Beaver Dam Mountain Wilderness Areas and the Virgin River scenic withdrawal has been withdrawn from locatable mineral entry and is closed to oil and gas development and mineral material sales.

Mineral development, above the level of casual use, in the area outside the wilderness but within the Virgin River Area of Critical Environmental Concern (segment 4) requires an approved plan of operations for locatable mineral development. Any plan of operations would contain mitigation to minimize impacts to riparian, scenic, and recreation values and to avoid impacts to endangered fish species.

Any oil and gas lease in segment 4 would carry a no surface occupancy stipulation along with standard stipulations.

Mineral potential is rated as moderate for placer gold and fluid mineral (oil and gas). The U.S. Geological Survey (1986) indicates that the area has sparse or no known mineral deposits, but geologic terrain is favorable or possible for the occurrence of copper and uranium.

The entire area of critical environmental concern is closed to mineral material disposal.

According to the minerals scenario it is reasonable to anticipate that two small mines covering less than nine acres would be started in the next 20 years. These two mines would have a projected three miles of access roads and employ 8 to 10 people.

- Conclusion

Ongoing management actions under implementation of the no action alternative would have no adverse impacts on mineral development.

Impacts on Water Development and Diversions

Water developments and rights within the river area are associated with livestock, agricultural, and domestic use. There are two water wells within the river area: one at the rest area and campground, the other abandoned. A diversion approximately three miles upstream from the Nevada-Arizona state line supplies water for agriculture to the Virgin Valley near Mesquite, Nevada.

The average rate of flow is 236 cfs based on 62 years of records from a U.S. Geologic Survey gauge at Littlefield. As a result of the Quail Creek Dam (St George, Utah) failure in 1989 a flow of approximately 61,000 cfs was recorded. Scouring of the riverbed as a result of high flows continuously affects channel morphology and riparian ecosystems.

Competition for water in the three state area (Utah, Arizona, Nevada) is rapidly increasing. Water from Beaver Dam Wash is being sought by interests in Nevada, Arizona, and Utah.

Downstream from the study area water is used for recreation, agriculture, fish, wildlife, residential, and commercial purposes. Virgin River water is actively being sought for various purposes in the Virgin Valley and Las Vegas Valley.

The Las Vegas Valley Water District has filed for water rights from the lower Virgin River for use in the rapidly expanding Las Vegas Valley. The Bureau of Reclamation and Las Vegas Valley Water District are implementing the Lower Virgin River Project, which would divert water from the Virgin River near Mesquite for use in Nevada. One possible diversion point is approximately three miles upstream from the stateline, within the study area.

Upstream from the study area water rights have been obtained for livestock, agricultural, domestic, and commercial (industrial) uses. Several new water development projects are

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

being proposed to support the continuing growth of southwestern Utah.

Communities in southern Utah are exploring ways to obtain water to support rapidly growing populations. The Washington County Water Conservancy District (1992) predicts that the population and the county's water needs will triple by 2010.

The existing and future demands far exceed the river's supply. The Washington County Water Conservancy District (1993) stated in part "The margin of reserve between supply and demand for water has diminished to the point that all water needs cannot be met for an increasing range of hydrologic events... protection of endangered and threatened species,

preservation and enhancement of wetlands, and recreational uses ... The result is growing conflicts between economic, quality of life, and environmental issues... "

The Bureau of Land Management has filed for instream flow water rights with the Arizona Department of Water Resources subject to state appropriated water laws and independent of Wild and Scenic River Act procedures. The filings may be adjusted based on the results of a comprehensive instream flow incremental modeling study. Recreation, fish, and wildlife are recognized as beneficial uses under the state system. The Bureau of Land Management has no plans to file for additional instream flow.

• Conclusion

Ongoing management actions under implementation of the no action alternative would have no adverse impacts on future water development and diversions.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Virgin River Wild and Scenic River study area environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Arizona Strip District Resource Management Plan (1991) that the Virgin River was eligible for further Wild and Scenic River study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Arizona Strip District Resource Management Plan is on file at the Shivwits Resource Area Office, St George, Utah, and the Arizona Strip District Office, St George, Utah.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Virgin River study area were held in Phoenix April 14 and in St. George, Utah April 16, 1993. Fifty-five to 60 people attended the Phoenix meeting and 20 to 25 attended the St. George meeting.

Five interagency public informational meetings for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource area and district offices conducted formal and

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. UNRESOLVED CONFLICTS

An unresolved conflict exists between the Bureau of Land Management and the Washington County Water Conservation District, St George, Utah.

The Washington County Water Conservation District objects to any recommendations for Congressional designation of the Virgin River. The agency contends that implementation of any of the alternatives, including no action, will have potential adverse impacts on southern Utah residential, commercial, and industrial development.

Personnel from the Washington County Water Conservation District, and local citizens supporting the contention, made statements during the public hearing in St. George, Utah, and wrote expressing their disagreement with the draft document.

Copies of the transcript from the St. George hearing and copies of the letters are in Chapter 5, Consultation and Coordination, in the Arizona Statewide Legislative Environmental Impact Statement.

E. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

T. Duck, Wildlife Biologist/Planning Coordinator, Arizona Strip District, Shivwits Resource Area; 13 years with the Bureau of Land Management; BA, Ecology, University of Arizona.

M. McQueen, Planning and Environmental Coordinator, Safford District; six years with the Bureau of Land Management; MS, Interdisciplinary Science, Western Oregon State University.

C. Stone, Archaeologist, Phoenix Resource Area; seven years with the Bureau of Land Management; PhD, Anthropology, Arizona State University.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

Members of the Review Group reviewed the document for consistency. They are:

**P. Buff, Assistant District Manager,
Minerals, Phoenix District.**

**J. Gaudio, Realty Specialist, Safford
District, Tucson Resource Area.**

**C. Laver, Planning and Environmental
Coordinator, Phoenix District.**

**P. Seegmiller, Range
Conservationist/Planning and
Environmental Coordinator, Arizona
Strip District, Vermillion Resource Area.**

**B. Smith, Renewable Resources
Advisor, Yuma District.**

The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

REFERENCES

Arizona Rivers Coalition

- 1991 Arizona Rivers, Lifeblood of the Desert: A Citizens' Proposal for the Protection of Rivers in Arizona, Phoenix

Public Laws

- 1973 P.L. 100-478, Endangered Species Act of 1973, as amended.
1976 P.L. 94-579, Federal Land Policy and Management Act of 1976.
1969 P.L. 91-190, National Environmental Policy Act of 1969.
1968 P.L. 98-542, Wild and Scenic Rivers Act of 1968.

U.S. Bureau of Land Management

- 1993 Virgin River Suitability Assessment, St. George, Utah .
1992 Shivwits Resource Area Resource Management Plan Implementation Plan, St. George, Utah .
1992 Potential Wild and Scenic Rivers, Phoenix, Arizona.
1991 Biological Assessment of Livestock Grazing in Desert Tortoise Habitat, St. George, Utah.
1990 Arizona Strip District Proposed Resource Management Plan/Final Environmental Impact Statement, St. George, Utah.
1990 Palute and Beaver Dam Mountains Wilderness Management Plan, St. George, Utah.
1983 Virgin River - Pakoon Basin Habitat Management Plan, St. George, Utah (with the Arizona Game and Fish Department).
1980 Shivwits Grazing Environmental Impact Statement, St. George, Utah.
ND Dixie Resource Management Plan (Draft), St. George, Cedar District, Utah

U.S. Fish and Wildlife Service.

- 1992 Biological Opinion on Livestock Grazing in Desert Tortoise Habitat on the Arizona Strip, Phoenix, Arizona.
ND Desert Tortoise Recovery Plan (Draft), Portland, Or.
ND Woundfin Recovery Plan, (Draft), Salt Lake City, Utah.

VIRGIN RIVER WILD AND SCENIC RIVER STUDY AREA

Internal Materials

Memorandum from Regional Environmental Officer, Lower Colorado Region, Bureau of Reclamation, to District Manager, Arizona Strip, BLM dated 5/27/93.

Memorandum from State Supervisor, U.S. Fish and Wildlife Service, Arizona Ecological Services State Office, to State Director, BLM Arizona, dated Jan. 4, 1994. Section 7 Consultation/species list.

**WRIGHT CREEK
WILD AND SCENIC RIVER STUDY AREA**

**KINGMAN RESOURCE AREA
PHOENIX DISTRICT**

FINAL LEGISLATIVE ENVIRONMENTAL IMPACT STATEMENT
December, 1994



WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

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WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

I. INTRODUCTION

A. PURPOSE AND NEED FOR THE ACTION

Specific portions of Wright Creek were identified in the Kingman Resource Management Plan (1993) as eligible for further study in the wild and scenic river evaluation process. The purpose of this action is to determine the suitability and to recommend these portions of Wright Creek to Congress for inclusion in the National Wild and Scenic Rivers System.

The action is a response to the Wild and Scenic Rivers Act of 1968 (P.L. 90-542), and complies with the National Environmental Policy Act of 1969 (P.L. 91-190) and the Federal Land Policy and Management Act of 1976 (P.L. 94-579).

B. GENERAL DESCRIPTION OF STUDY AREA

The Wright Creek Wild and Scenic River Study Area is in northwestern Arizona approximately 30 miles northeast of Kingman, Arizona, in Mohave County. The northern end of the study area is one mile south of Highway 66. Wright Creek is administered by the Kingman Resource Area of the Phoenix District.

The Wright Creek study area comprises a corridor of 13 miles containing 3,861 acres, 96 percent of it public land administered by the Bureau of Land Management. The study area ranges in elevation from approximately 3,960 to 5,280 feet and is situated in the Great Basin Biotic Community and the Colorado Plateau Physiographic Province. The study area lies within the Bill Williams River Basin and drains generally the east side of the Cottonwood Mountains before emptying into Truxton Wash.

Wright Creek was determined to be eligible for inclusion in the Wild and Scenic Rivers System by the Bureau of Land Management in the Kingman Resource Management Plan (1993).

The Wright Creek study area consists of a single river segment. The Wright Creek study area has been classified as Scenic.

The creek is perennial and free-flowing with outstandingly remarkable fish and wildlife habitat and cultural values.

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

**TABLE WC-1
WILD AND SCENIC RIVERS STUDY AREA RIVER MILEAGE SUMMARY**

WRIGHT CREEK	BLM	State OF ARIZONA	PRIVATE	TOTAL
TOTAL MILES	12.5	0	0.5	13.0
PERCENT	96	0	4	100
TOTAL ACRES	3,861	0	171	4,032
PERCENT	96	0	4	100
SUBSURFACE MINERALS ACRES	4032	0	0	4032

C. INTERRELATIONSHIPS

1. Bureau of Land Management

The Wright and Cottonwood Creeks Riparian and Cultural Area of Critical Environmental

Concern, totaling 27,285 acres, was established in the Kingman Resource Management Plan (1993) to protect cultural and potential riparian resources.

TABLE WC-2

BUREAU OF LAND MANAGEMENT ADMINISTERED PUBLIC LAND IN THE WRIGHT CREEK WILD AND SCENIC STUDY AREA UNDER OTHER DESIGNATIONS

WRIGHT CREEK STUDY AREA	TOTAL ACRES	PERCENT OF TOTAL RIVER AREA
Wright and Cottonwood Creeks Riparian and Cultural Area of Critical Environmental Concern	3,861	96

2. Other Federal Agencies

The Hualapai Indian Reservation is three miles north of the northern end of the study area.

approximately 171 acres of private land within the study area. The land is currently owned and used by the grazing permittee for a livestock operation.

3. State

There are no state lands within the study area.

D. SCOPING

4. Private

Approximately 0.5 miles of the study area passes through private lands. There are

Scoping meetings specifically highlighting the Wright Creek study area were held in Kingman April 6, 1993 and Phoenix on April 14. About 20 people attended the Kingman meeting and 55 to 60 attended the Phoenix meeting.

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

The issues concern the effects of wild and scenic river designation on existing and potential land and water uses or resources in the general area of the study area, as well as the effects of existing and potential land and water uses or resources on wild and scenic river values.

Uses or resources raised as issues specifically for this study area are as follows:

Scoping Issues

- Impacts on private property
- Impacts on public access
- Impacts on livestock grazing
- Impacts on the local population and economy
- Impacts on water rights
- Impacts on future rights-of-way
- Impacts on mineral development
- Why wasn't the East Fork of Wright Creek considered for eligibility
- Impacts on air quality
- Impacts on the outstandingly remarkable fish and wildlife habitat values that support the longfin dace
- Impacts on outstandingly remarkable cultural resource values

Issues Considered But Not Addressed

- Impacts on private property.

There are approximately 171 acres of private land within the study area owned by the livestock permittee.

Current uses of the river and adjoining lands would continue. The Bureau of Land Management has no authority to regulate or zone private lands and would not seek authority to do so. Any future management restrictions would apply only to public lands. If a proposed development on private land is clearly incompatible with the management plan for the river, the Bureau of Land Management would attempt to purchase a scenic or conservation

easement on a willing seller-willing buyer basis. There would be no impact on private property uses from implementation of the alternatives.

This issue will not be discussed further.

- Impacts on public access.

Public access in the study area consists primarily of rarely maintained two-track roads that lead to the stream and which sometimes cross the bed. The roads are used mostly by the grazing permittee for livestock management, and by hunters and other recreation users. Neither of the alternatives would affect access to the study area.

This issue will not be considered further.

- Impacts on livestock grazing.

Wright Creek lies entirely within the 114,654 acre Crozier Canyon Allotment. The allotment is a yearlong cow/calf operation with 14,439 animal unit months authorized on the public land portion.

Neither of the alternatives would affect livestock grazing in the study area. Grazing would continue to follow the management actions of the Wright and Cottonwood Creeks Riparian and Cultural Area of Critical Environmental Concern Plan. Therefore, livestock grazing will not be analyzed in detail.

This issue will not be considered further.

- Impacts on the local population and local economy.

Employment and income would not be affected by implementation of the alternatives. No existing minerals operations, exploration, or leasing would be affected by wild and scenic river designation. Impacts from closing areas to mineral entry under actions of the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan and the

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

Kingman Resource Management Plan have been examined in other environmental documents.

National publicity associated with the designation could increase tourism. However, benefits to the local economy from increased tourism from wild and scenic river designation would be slight.

This issue will not be considered further.

- Impacts on water rights.

At present, the Bureau of Land Management has not filed an application for an instream flow with the State. The Bureau of Land Management has set up monitoring stations and plans to conduct an instream flow assessment to determine the amount of water needed to protect the wildlife and aquatic values. The Bureau of Land Management will submit an instream flow application with the State.

Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.

A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.

In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing

seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.

This issue will not be discussed further.

- Impacts on future rights-of-way.

Currently, there are no utility corridors or rights-of-way in the study area, and none are expected to be designated in the foreseeable future.

The policy of the Bureau of Land Management regarding rights-of-way for wild and scenic rivers is as follows:

New transmission lines, including natural gas lines and water lines are discouraged unless specifically authorized by other plans, orders, or laws. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are unavoidable, locations and construction techniques shall be selected to minimize adverse effects on wild and scenic river area related values and fully evaluated during the site selection process.

This issue will not be discussed further.

- Why the East Fork of Wright Creek was not considered for eligibility.

Eligibility of the East Fork of Wright Creek was considered in the Final Kingman Resource Management Plan (BLM 1993).

This issue will not be discussed further.

- Impacts on air quality.

The implementation of the management actions associated with any of the alternatives will not have impacts on air quality in the Wright Creek study area because there will be no surface disturbance or development that would release particulate matter.

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

This issue will not be discussed further.

E. WILD AND SCENIC RIVER DESIGNATION ISSUES

An interdisciplinary team of resource specialists reviewed public comments received during the

scoping meetings and the draft environmental impact statement to determine the areas of major concern. The team, together with resource managers, incorporated these major concerns into their design and selection of a range of reasonable alternatives.

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

II. DESCRIPTION OF THE ALTERNATIVES

A. INTRODUCTION

This section describes the resource management provisions planned or projected to occur in the Wright Creek study area under each alternative. The projections are professional estimates of reasonably-foreseeable future actions based on current conditions and trends.

The provisions for the alternatives include actions assumed to be consistent with the management plans that would be developed under wild and scenic river designation. These provisions are not management proposals, but represent probable patterns of activities which may occur as either a result of wild and scenic river designation or the area being returned management under existing plans.

The following alternatives are addressed:
Recommended alternative
All suitable alternative (scenic)

B. RECOMMENDED ALTERNATIVE (NO ACTION/NOT SUITABLE)

The recommended alternative determines the entire Wright Creek study area to be not suitable and does not recommend the segment for inclusion in the National Wild and Scenic Rivers System.

Implementation of the recommended alternative would rescind any protective status associated with the eligibility findings, and place the river area under applicable multiple-use management prescriptions. The study area is part of the Wright and Cottonwood Creeks Riparian and Cultural Area of Critical Environmental Concern.

Wild and Scenic River Management Actions

The recommended alternative determines the

entire Wright Creek study area to be nonsuitable and does not recommend it for designation as a wild and scenic river. No wild and scenic river management actions would apply.

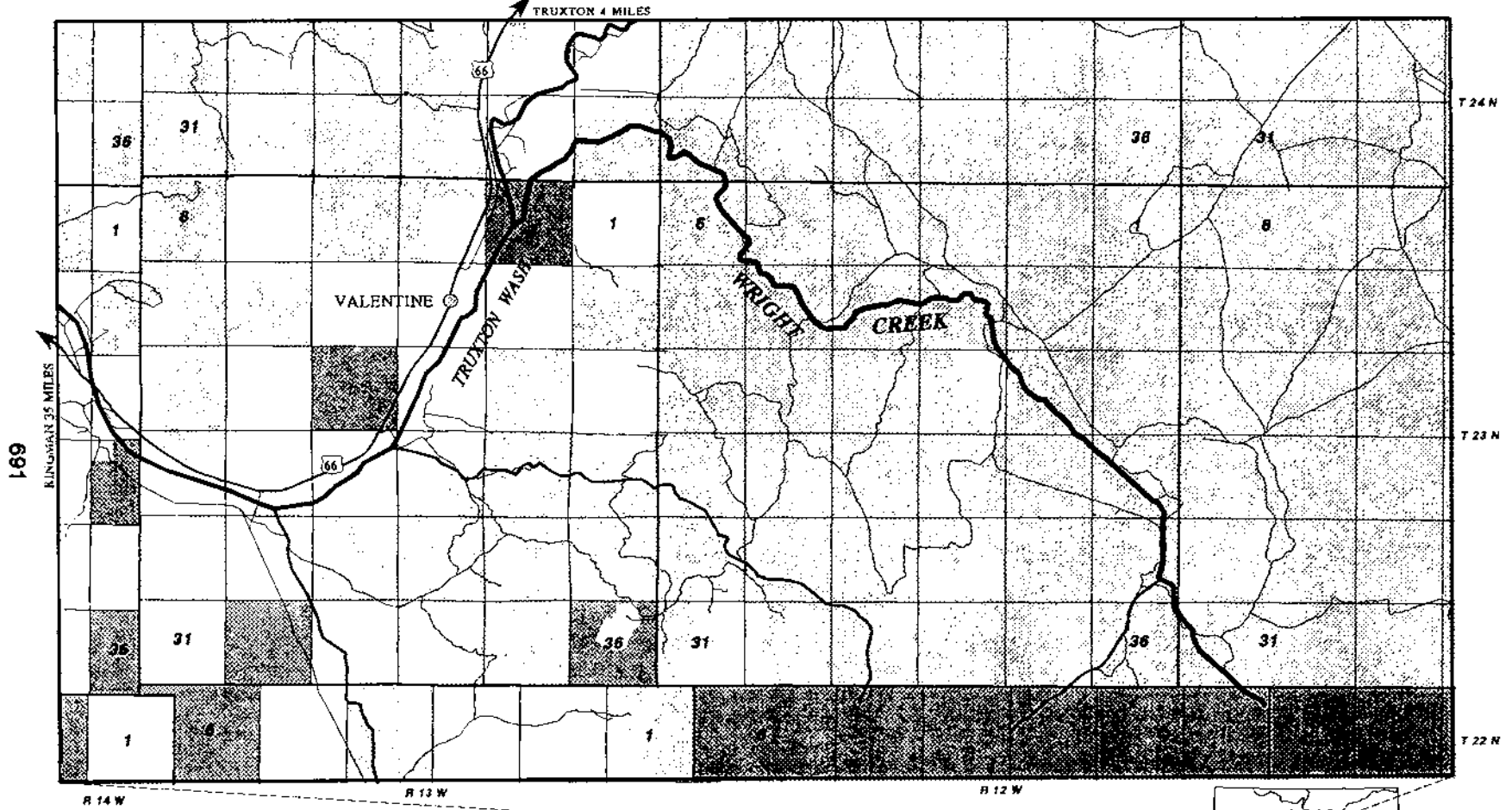
Ongoing Management Actions

Ongoing management actions in the Wright Creek study area would continue regardless of wild and scenic river designation. The following are selected management actions from the Kingman Resource Area Resource Management Plan and Wright and Cottonwood Creeks Riparian Area of Critical Environmental Concern Plan.

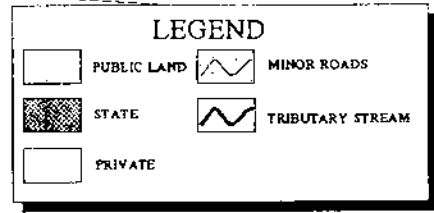
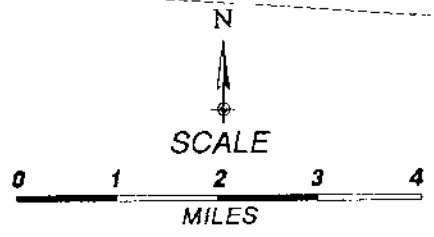
- The riparian zones, amounting to approximately 325 acres, would be recommended for withdrawal from mineral entry.
- Approved plans of operations would be required for all mineral exploration and development activities above the level of casual use.
- Mineral leasing would be allowed in the riparian zones with no surface occupancy, and in other areas, subject to the appropriate stipulations designed to protect resource values, such as limiting the number and width of new and upgraded roads.
- No mineral material disposals would be allowed in riparian zones.
- Up to 171 acres of nonfederal surface and subsurface estates would be acquired.
- Off-highway vehicle use would be limited to existing roads and trails.
- Developed campgrounds in the 100-year floodplain would be prohibited.
- Removal of native plants would be prohibited.

WRIGHT CREEK

(Recommended Alternative)



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- Desired plant community descriptions would be developed for the riparian zone.
- Livestock grazing would be managed to achieve desired riparian plant community objectives through techniques such as constructing two miles of new and five miles of existing enclosure fences, developing one alternate water source, and limiting livestock grazing season of use in the riparian areas.
- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- In the event cultural resources are discovered during mining activities, the Area Manager would be contacted immediately.
- Instream flow monitoring would be conducted to determine the minimum flow required to support aquatic and riparian habitat values, and to meet the Arizona State Division of Water Resources requirements for a state appropriated water right for Wright Creek.
- The Bureau of Land Management would ensure that adequate water quality and quantity is provided to maintain thriving riparian areas.
- The Bureau of Land Management would

ensure that water quality is monitored and meets or exceeds federal and state standards.

C. ALL SUITABLE ALTERNATIVE (SCENIC)

The all suitable alternative determines as suitable the entire 13-mile length of Wright Creek in the study area and recommends the study area for designation with a Scenic classification.

If the all suitable alternative is selected and implemented, current resource management would change. The following summarizes selected management actions.

Wild and Scenic River Management Actions

Wild and scenic river designation would require certain management actions to be initiated. In accordance with the Bureau of Land Management Wild and Scenic River Manual (MS 8351, August 19, 1992), the following would occur in the implementation of the all suitable alternative recommending Wright Creek as a Scenic river. Where wild and scenic river management actions overlap ongoing management actions, the more stringent action would apply.

- New mining claims and mineral leases would be allowed under the Scenic classification.
- Patents would be restricted to the mineral estate.
- Construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands except where such developments would not have a direct and adverse effect on the river and its immediate environment would be prohibited.
- New hydroelectric power facilities would be prohibited. Flood control dams and levees would be prohibited.

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

- Water supply dams and major diversions would be prohibited.
- Maintenance of existing facilities and construction of some new structures would be permitted.
- New transmission lines and natural gas lines would be discouraged. Where no reasonable alternate location exists, additional or new facilities should be restricted to existing rights-of-way.
- Motorized travel would be permitted if there were no impairment of outstandingly remarkable values.
- New roads or trails would be allowed.
- Livestock grazing use would be permitted.
- Moderate-sized campgrounds, interpretive centers, or administrative headquarters would be permitted.
- Recreation use would be encouraged in scenic river areas, but public use and access may be regulated to protect and enhance scenic river values.
- Woodcutting would be allowed. Cutting of dead and down wood would be limited. Restrictions on use of wood for fuel could be prescribed.
- Water quality would be maintained or improved.
- Under the all suitable alternative, instream flow monitoring and a comprehensive assessment would be conducted to determine the minimum flow required to support the outstandingly remarkable habitat and aquatic values and ensure a constant flow of water needed to support the longfin dace in Wright Creek.

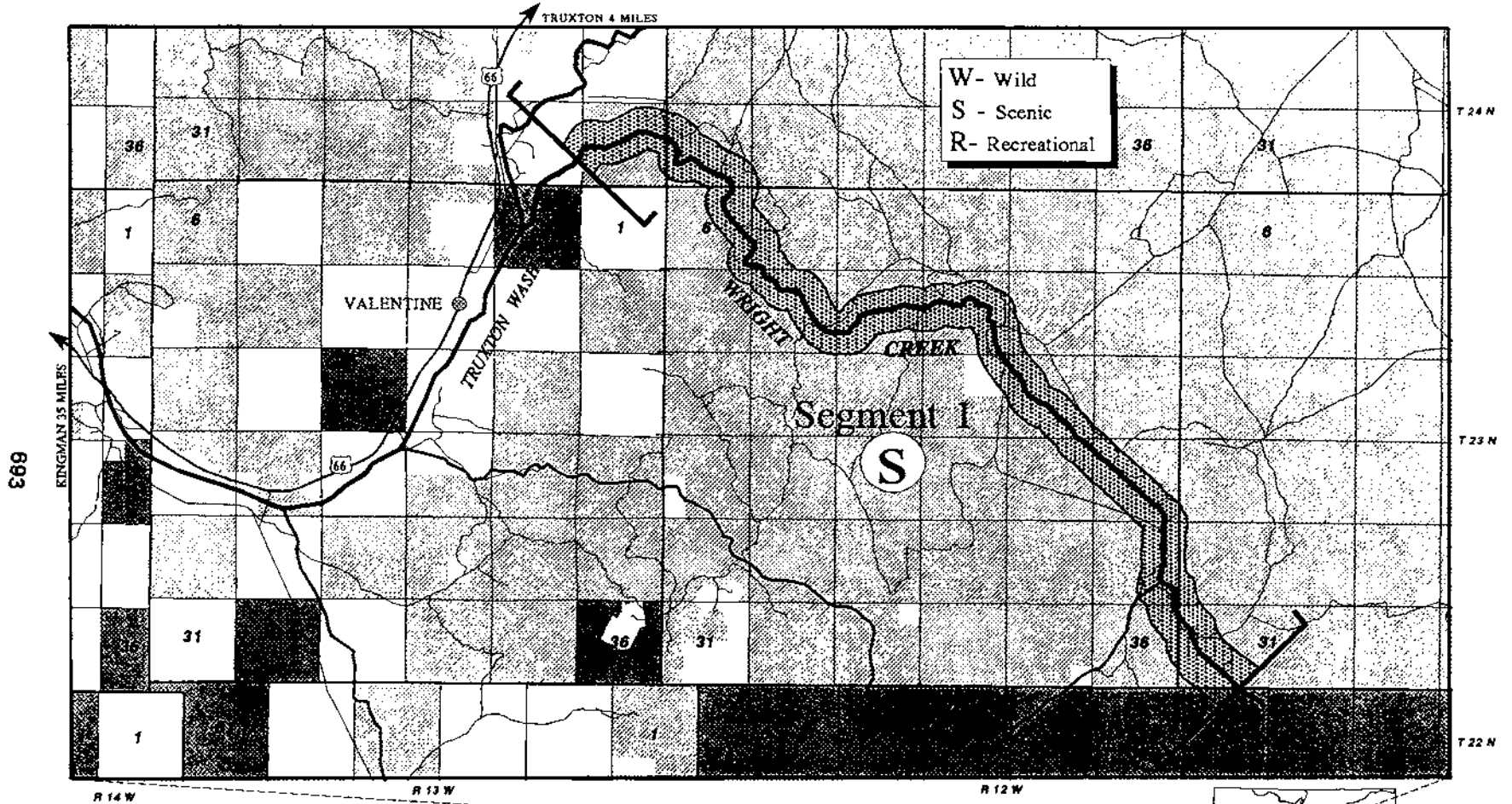
Ongoing Management Actions

The ongoing management actions summarize selected provisions of the Kingman Resource Area Resource Management Plan and Wright and Cottonwood Creeks Riparian Area of Critical Environmental Concern Plan.

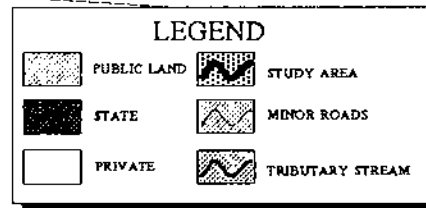
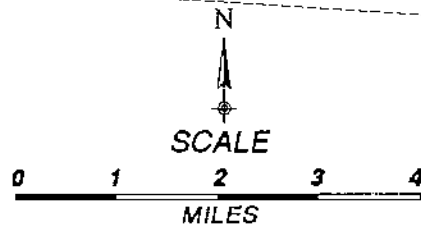
- The riparian zones, totalling approximately 325 acres, would be recommended for withdrawal from mineral entry.
- Approved plans of operations would be required for all mineral exploration and development activities above the level of casual use.
- Mineral leasing would be allowed in the riparian zones with no surface occupancy, and in other areas, subject to the appropriate stipulations designed to protect resource values, such as limiting the number and width of new and upgraded roads.
- No mineral material disposals would be allowed in riparian zones.
- Up to 171 acres of nonfederal surface and subsurface estates would be acquired.
- Off-highway vehicle use would be limited to existing roads and trails.
- Developed campgrounds in the 100-year floodplain would be prohibited.
- Removal of native plants would be prohibited.
- Desired plant community descriptions would be developed for the riparian zone.
- Livestock grazing would be managed to achieve desired riparian plant community objectives through techniques such as constructing two miles of new and five miles of existing exclosure fences, developing one alternate water source, and limiting livestock grazing season of use in the riparian areas.

WRIGHT CREEK

(All Suitable Alternative)



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LOCATION DIAGRAM

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- Proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist. In most cases, a cultural resource field inventory of the potentially affected area would be completed.
- If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.
- Protection measures, such as fencing or periodic monitoring, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.
- In the event cultural resources are discovered during mining activities, the Area Manager would be contacted immediately.
- The Bureau of Land Management would ensure that adequate water quality and quantity

is provided to maintain thriving riparian areas.

- The Bureau of Land Management would ensure that water quality is monitored and meets or exceeds federal and state standards.

D. ALTERNATIVES CONSIDERED BUT REJECTED

An alternative suggesting two segments for the Wright Creek study area was submitted. This alternative recommends eliminating 0.5 mile (171 acres) of private property from the original 13-mile segment. However, this alternative is not a realistic option because the Kingman Resource Management Plan calls for acquisition of these private lands on a willing seller-willing buyer basis.

No other alternatives were formulated by the Bureau of Land Management. No other alternatives were suggested by public or other agency sources.

**TABLE WC-3
COMPARISON OF IMPACTS BY ALTERNATIVE**

Issues	Recommended alternative (no action)	All suitable
Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values	Possible minor adverse impact on fish and wildlife habitat values from mining activity; administrative protection only	Possible minor adverse impact on fish and wildlife habitat values from mining activity; special legislative protection
Impacts on Outstandingly Remarkable Cultural Values	No adverse impacts; administrative protection only	No adverse impacts; special legislative protection
Impacts on Mineral Development	No adverse impacts	No adverse impacts

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

III. AFFECTED ENVIRONMENT

This section contains information on those resources in the Wright Creek study area that could be affected by the implementation of the alternatives for recommending the river segments for inclusion in the National Wild and Scenic Rivers System.

Further information is contained in the Kingman Resource Management Plan, and the Wright Creek suitability assessment (1993).

A. OUTSTANDINGLY REMARKABLE VALUES

The Wright Creek study area contains outstandingly remarkable fish and wildlife habitat values. It supports a variety of wildlife, including 30 mammals, 30 reptiles, one native fish and eight amphibian species. In addition, more than 100 bird species ranging from permanent residents to rare or migrant species may be found in this area.

The creek is isolated from other watercourses in the resource area which support fish populations. It is a perennial stream providing habitat for an atypical strain of longfin dace (Agosia chrysogaster). The fish population is considered atypical because of the phenotypic mottling found within the population.

Wildlife habitat in the study area has been classified as uncommon in the Arizona Rivers Assessment completed by the Arizona Game and Fish Department. Species typically found in the area include the lowland leopard frog (Rana yavapaiensis), sharp-shinned hawk (Accipiter striatus), zone-tailed hawk (Buteo albonotatus), common black hawk (Buteo anthracinus), mule deer (Odocoileus hemionus) and pronghorn antelope (Antilocapra americana).

According to the U.S. Fish and Wildlife Service, loach minnow (Tiaroga cobitis), a threatened species, and American peregrine falcon (Falco peregrinus anatum) and bald eagle (Haliaeetus leucocephalus), both endangered species, may

occur within the study area. The southwestern willow flycatcher (Empidonax traillii extimus) is a proposed endangered species that may also occur in the area. Blackhawks are listed as a state sensitive species.

The area contains outstandingly remarkable cultural resource values with its unique blend of prehistoric and historic resources. The Beale/Mohave Road runs along the northern boundary. This is a 1,000-year old Indian trail that later became the first wagon road across northern Arizona.

This same route was later used for the first railroad and still later for U.S. Route 66. The first cattle ranching homesteads in Mohave County were established in this area in the 1870s.

The area is unique because of the numerous sites of the Cohonina Culture dating from approximately A.D. 700 to 1150. It also contains Prescott culture pueblos that date to the same period. The western Cohonina sites have never been studied.

The area also has a prehistoric agricultural site. Only one other site of this type has been recorded in the resource area. Agricultural activities away from the main rivers were extremely rare in northwestern Arizona.

B. MINERALS

The geology of the study area is typical of the Colorado Plateau physiographic region.

The river area has no potential for oil and gas, coal, sodium or other saline minerals. The area also has low potential for metallic minerals. There are no sand and gravel pits operating or any other types of non-metallic mines in the river area.

There are five active mining claims in the study

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

area. Bureau of Land Management records show that very little activity has occurred in the past several years.

C. LANDS

The transportation network within the river area consists primarily of rarely maintained two-track roads that lead to the stream and which sometimes cross the bed. The roads are used mostly by the grazing permittee for livestock management, and by hunters and other recreational users.

There are no county roads, or state or federal highways within the river area. There are no existing utility corridors within the study area.

There are approximately 171 acres of private land within the study area. The land is currently owned and used by the permittee for his livestock grazing operation. No other private or commercial development exists within the study area.

D. RECREATION

Recreational use within the study area is considered to be low with fewer than 500 visitor use days per year. The dominant uses are hunting for mule deer and upland game birds, and off-highway vehicle use in conjunction with sightseeing. There are no recreation facilities within the study area and none are planned.

The Arizona Rivers Assessment (Phase II) ranked the uniqueness and diversity of recreational activities on Wright Creek as limited, partly because of the lack of infrastructure such as trails, signs, and information brochures (1992).

E. VEGETATION

At its upper elevations, Wright Creek flows through the pinyon-juniper communities of pinyon pine (*Pinus edulis*), one-seeded juniper (*Juniperus osteosperma*), blue grama

(*Bouteloua gracilis*), sideoats grama (*Bouteloua curtipendula*), Indian paintbrush (*Castilleja* spp.), scrub liveoak (*Quercus turbinella*), banana yucca (*Yucca baccata*), and century plant (*Aqave utahensis*).

On the lower upland reaches, desert grassland communities dominate with black grama (*Bouteloua eriopoda*), sideoats grama (*Bouteloua curtipendula*), desert needle grass (*Stipa speciosa*), Indian ricegrass (*Oryzopsis hymenoides*), snakeweed (*Gutierrezia sarothrae*), and winter fat (*Ceratoides lanata*).

The narrow strip of vegetation that occurs within the riparian zone supports red willow (*Salix laevigata*), Fremont's cottonwood (*Populus fremontii*), velvet ash (*Fraxinus velutina*), desert willow (*Chilopsis linearis*), mesquite (*Prosopis juliflora*), catclaw (*Acacia greggii*), seepwillow (*Baccharis glutinosa*), yellow sweetclover (*Medicago hispida*), watercress (*Nasturtium officinale*), rushes (*Juncus* spp.), sedges (*Carex* spp.), and various grasses.

The 1988 Riparian Area Condition Evaluation rated the riparian area within the study area as being in unsatisfactory condition. Overgrazing by livestock has contributed to this condition. The upstream sections are lacking in streamside vegetation.

F. WATER RESOURCES

Wright Creek is considered to be perennial, in that surface water flows in certain locations yearlong, except in the driest years, but water does not normally flow over the stream's entire length. Water quality is generally good.

Recent land exchanges have increased the amount of public land along the stream, which has improved the capability of maintaining and enhancing water quality.

There are two developed water wells in the study area. One of the wells is located on the private parcel within the study area. There are

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

at least two undeveloped springs within the study area.

The relationship between existing consumption and flows on Wright Creek are currently unknown and, at present, the Bureau of Land Management has not filed an instream flow application with the State. However, the Bureau of Land Management has set up several monitoring sites and plans to conduct an instream flow assessment to determine the amount of water needed to protect the wildlife and aquatic values. This quantification would support either the federal reserved water right granted upon designation or the instream flow application to be filed with the State of Arizona, if not designated.

G. LIVESTOCK GRAZING

Wright Creek lies entirely within the 114,654- acre Crozier Canyon Allotment. The allotment is a yearlong cow/calf operation with 14,439 animal unit months authorized on the public land portion.

The area has been historically overgrazed by livestock, resulting in the current poor condition of the rangeland and riparian zones.

Recent inventories indicate virtually all of Wright Creek is currently in unsatisfactory ecological condition. Recent land exchanges have blocked up the public land which would facilitate the Bureau of Land Management's efforts to improve ecological conditions in the upland and riparian zones within the study area.

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

IV. ENVIRONMENTAL CONSEQUENCES

A. INTRODUCTION

In this section the environmental consequences of implementing the alternatives on the Wright Creek study area are analyzed. Resources and activities that are not affected substantially by implementing an alternative are not discussed.

Certain assumptions are basic to the analytical procedure. These are:

1. All management actions would comply with appropriate laws, regulations and policies.
2. The implementation of each alternative would involve a fully funded and staffed administrative office.
3. The period of analysis for this project is 20 years. Short-term impacts are those occurring within five years of implementation.
4. Direct effects are caused by the activity and occur at the same time and place. Indirect effects are caused by the action but are later in time or farther removed in distance.
5. Ongoing management actions described in Chapter II would continue to be implemented under all the alternatives.
6. Designation as a Wild, Scenic, or Recreational river would not affect existing, valid water rights. The Wild and Scenic Rivers Act creates a federal reserved water right for a quantity of water sufficient to meet the purposes of the act on designated river segments. The Bureau of Land Management would have the responsibility to preserve each designated segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility would be determined through assessments of instream flow needs.
7. A new federal reserved water right asserted by a wild and scenic river designation would be junior to all valid and existing rights. This action would have no impact on existing water rights either upstream or downstream because it would be junior to any existing right.
8. In addition, the Bureau of Land Management would seek to acquire other means of protection through the purchase, on a willing seller-willing buyer basis, of water rights, land exchanges, negotiated agreements, or other appropriate arrangements.
9. Management plans would be developed in compliance with the National Environmental Policy Act for any Congressionally designated wild and scenic river.
10. In the mineral development scenarios used in this document, the typical small mining operation would employ fewer than five people and disturb fewer than five acres (unless otherwise identified). The typical moderate-sized mining operation would employ up to 12 people and disturb up to five acres. One access road would be built for each small mine. One access road would be built for each moderate sized mine. Large mining operations would be those involving more than five acres.

No oil or gas development is anticipated in the Wright Creek study area.

B. IMPACTS FROM IMPLEMENTING THE RECOMMENDED ALTERNATIVE

The recommended alternative determines the entire Wright Creek study area as nonsuitable and does not recommend the area for designation as a wild and scenic river. The outstandingly remarkable values identified in the Eligibility evaluation would not receive special legislative protection. The outstandingly remarkable values would be subject to the

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

effects of actions allowable under the Wright and Cottonwood Creek Riparian and Cultural Areas of Critical Environmental Concern Plan.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values (Longfin Dace)

Wright Creek is a perennial stream isolated from other watercourses, and provides habitat for a variety of wildlife, including a phenotypically unique subspecies of longfin dace. This fish population is considered atypical because of the phenotypic mottling found within the population. One threatened fish species and two endangered bird species may also occur within the study area.

No wild and scenic river management actions would occur. The outstandingly remarkable fish and wildlife values would not have long-term legislative protection under the Wild and Scenic Rivers Act. However, ongoing management actions would continue to afford some protection to fish and wildlife habitat values.

In compliance with the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan, the removal of native plants would be prohibited, except for salvage operations. One hundred seventy-one acres of private land within the study area would be acquired on a willing-buyer willing-seller basis. Acquiring the private lands in the study area would benefit habitat values by providing federal protection. The riparian area would be recommended for withdrawal from mineral entry. This would provide adequate protection from future mining activities for those areas inhabited by the longfin dace.

Instream flow monitoring would be conducted to determine the minimum flow required to support aquatic and riparian habitat values, and to meet the Arizona State Division of Water Resources requirements for a state appropriated water right for Wright Creek. Applications for instream flow water rights would be pursued through the state appropriations/adjudication

process. This would help ensure a constant flow of water needed to support the longfin dace. The Bureau of Land Management would ensure that adequate water quality and quantity is provided to maintain thriving riparian areas and ensure that water quality is monitored and meets or exceeds federal and state standards.

Livestock grazing would be managed to achieve desired riparian plant community objectives through techniques such as constructing two miles of new and five miles of existing enclosure fences, developing one alternate water source, and limiting livestock grazing season of use in the riparian areas.

The minerals scenario indicates there would be one small and one moderate sized mine covering a total of nine acres outside of the riparian zones. This activity could indirectly affect the longfin dace with a reduction of fish population from degradation of habitat caused by a decline in water quality from increased sedimentation, chemical spills, excavations, and dumps.

Bureau of Land Management approval of new plans of operations in non-riparian areas would include stipulations protecting the habitat resources such as prohibiting actions that would lead to increased sedimentation.

• Conclusion

Under this alternative, the study area would not receive special long-term legislative protection. Implementation of the recommended alternative could have minor adverse impacts on the outstandingly remarkable fish and wildlife habitat values.

Impacts on Outstandingly Remarkable Cultural Resource Values

The Wright Creek study area has a unique blend of prehistoric and historic resources. The Beale/Mohave Road runs along the northern boundary. This is a 1,000-year old Indian trail

WRIGHT CREEK WILD AND SCENIC RIVER STUDY AREA

that later became the first wagon road across northern Arizona. This same route was later used for the first railroad and still later for U.S. Route 66. The first cattle ranching homesteads in Mohave County were established in this area in the 1870's.

The area is unique because of the numerous sites of the Cohonina Culture dating from approximately A.D. 700 to 1150. It also contains Prescott Culture pueblos which date to the same period. The western Cohonina site have never been studied.

The area also has a prehistoric agricultural site. Only one other site of this type has been recorded in the resource area. Agricultural activities away from the main rivers were extremely rare in northwestern Arizona.

No wild and scenic river management actions would occur. The outstandingly remarkable cultural resource values would not have long-term legislative protection under the Wild and Scenic Rivers Act. However, ongoing management actions would continue to afford protection to outstandingly remarkable cultural resource values.

Under the Wright and Cottonwood Creek Riparian and Cultural Areas of Critical Environmental Concern Plan, if sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity.

If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer.

Protection measures, such as fencing or periodic monitoring, would be developed for selected cultural resources that have either a high level of significance or a history of vandalism.

In the event cultural resources are discovered

during mining activities, the area manager would be contacted immediately.

• Conclusion

Under this alternative, the outstandingly remarkable cultural resource values study area would not receive long-term legislative protection from the Wild and Scenic Rivers Act. There would be no adverse impacts to the outstandingly remarkable cultural resource values from the implementation of the recommended alternative.

Impacts on Minerals

According to the U.S. Geological Survey the river area has no potential for oil and gas, coal, sodium or other saline minerals. The area also has low potential for metallic minerals. There are no sand and gravel pits operating or any types of non-metallic mines in the study area. There are five active mining claims in the study area. Very little activity has occurred in the past several years.

No wild and scenic river management actions would occur. Minerals development would not be affected by wild and scenic river designation. However, ongoing management actions would continue to apply to minerals activities.

In accordance with the management actions of the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan, the riparian zones, totalling approximately 325 acres, would be recommended for withdrawal from mineral entry.

The management prescriptions in the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan require Bureau of Land Management approval of plans of operations for all mineral exploration and development activities above the level of casual use.

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In accordance with the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan, mineral leasing would be allowed in the riparian zones with no surface occupancy. In other areas, leasing would be subject to the appropriate stipulations designed to protect resource values, such as limiting the number and width of new and upgraded roads.

In accordance with the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan, no mineral material disposals would be allowed in riparian zones.

In accordance with the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan, the 171 acres of nonfederal surface and subsurface estates would be acquired.

Outside the riparian area, although the mineral potential is low, one small mine and one moderate mine are projected. These would disturb approximately nine acres. Access roads would cover four miles. The mines would employ 10 people. No new mining activity involving mines over five acres is anticipated in the study area. If this would occur, however, Bureau of Land Management approval of any new mining plans of operations would be subject to appropriate stipulations designed to protect resource values.

• Conclusion

There would be no adverse impacts on mining from the implementation of the recommended alternative.

Cumulative effects of implementing the recommended alternative

A cumulative impact is defined as the impact on the environment resulting from the incremental impact of the action when added to other past, present, and reasonably foreseeable future

actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

Cumulative impacts were examined over a circular area with a radius of approximately five miles from the center of the Wright Creek study area. Over most of the area the type of actions that could affect, or would be affected by, implementation of the recommended alternative are subject to existing management regulations and constraints associated with land use plans.

The cumulative impacts associated with implementation of the recommended alternative would be negligible due to the regulations and constraints of the 27,285-acre Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern, established in the Kingman Resource Management Plan (1993), and management actions of the Kingman Resource Management Plan requiring the completion of environmental compliance documents prior to approving site specific activities.

Irretrievable and irreversible commitments of resources

Under the recommended alternative there are no irretrievable and irreversible commitments of resources. The Wright and Cottonwood Creek Riparian and Cultural Areas of Critical Environmental Concern was established by an administrative action that can be revised as needs change.

Unavoidable adverse effects

There would be no unavoidable adverse effects from implementation of the recommended alternative.

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Short-term uses of the environment versus long-term productivity

Under the recommended alternative, all short-term uses would continue and future development options not restricted by other management actions would remain open.

C. IMPACTS FROM IMPLEMENTING THE ALL SUITABLE ALTERNATIVE (SCENIC)

The all suitable alternative determines the 3,861-acre Wright Creek study area suitable for designation with a Scenic classification. The alternative recommends the study area for designation as a wild and scenic river. Under the all suitable alternative, the outstandingly remarkable values would receive long-term legislation protection under the Wild and Scenic Rivers Act.

Impacts on Outstandingly Remarkable Fish and Wildlife Habitat Values (Longfin Dace)

Wright Creek is a perennial stream isolated from other watercourses, and provides habitat for a variety of wildlife, including a phenotypically unique subspecies of longfin dace. The fish population is considered atypical because of the phenotypic mottling found within the population. One threatened fish species and two endangered bird species may occur within the study area.

Under the all suitable alternative, construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited. This would protect the outstandingly remarkable fish and wildlife habitat by preserving current waterway conditions.

Implementation of scenic river management would require the Bureau of Land Management to maintain or improve water quality. Appropriate action plans would be developed and implemented to accomplish this. The outstandingly remarkable fish and wildlife values

would benefit as a result.

Scenic river management would restrict patents to the mineral estate. Excluding the surface estate from patents would insure that federal protection would continue after mining has ceased. This would protect the outstandingly remarkable fish and wildlife values from potential degradation from minerals activities.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, 171 acres of private land within the study area would be acquired on a willing-buyer willing-seller basis. Acquiring the private lands in the study area would benefit habitat values by providing federal protection.

Removing native plants would be prohibited. Livestock grazing would be managed to achieve desired riparian plant community objectives through techniques such as constructing two miles of new and five miles of existing enclosure fences, developing one alternate water source, and limiting livestock grazing season of use in the riparian areas.

Designation as a wild, scenic, or recreational river will not have any effect on existing, valid water rights. When a river segment has been designated, the Bureau of Land Management will have the responsibility to preserve that segment in its free-flowing condition to protect its outstandingly remarkable values. The quantity of water necessary to fulfill that responsibility has been or will be determined through assessments of instream flow needs.

Under the all suitable alternative instream flow monitoring and a comprehensive assessment would be conducted to determine the minimum flow required to support the outstandingly remarkable habitat and aquatic values and ensure a constant flow of water needed to support the longfin dace in Wright Creek.

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Under the all suitable alternative and in accordance with the management actions of the Wright and Cottonwood Creeks Area of Critical Environmental Concern Plan, the riparian area would be recommended for withdrawal from mineral entry. This would provide adequate protection from future mining activities for those areas inhabited by the longfin dace.

In the upland area, the minerals scenario indicates there would be one small and one moderate sized mine covering a total of nine acres. This activity could indirectly affect the longfin dace with a reduction of fish population from degradation of habitat caused by a decline in water quality from increased sedimentation.

Bureau of Land Management approval of new plans of operations for mines in the non-riparian area would include stipulations protecting the habitat resources such as prohibiting actions that would lead to increased sedimentation.

• Conclusion

The outstandingly remarkable fish and wildlife habitat values would receive long-term legislative protection under the Wild and Scenic Rivers Act. Under the all suitable alternative minerals development activities could have indirect minor adverse impacts on the outstandingly remarkable fish and wildlife habitat values.

Impacts on Outstandingly Remarkable Cultural Resource Values

The Wright Creek study area has a unique blend of prehistoric and historic resources. The Beale/Mohave Road runs along the northern boundary. This is a one thousand year old Indian trail that later became the first wagon road across northern Arizona. This same route was later used for the first railroad and still later for U.S. Route 66. The first cattle ranching homesteads in Mohave County were established in this area in the 1870's.

The area is unique because of the numerous sites of the Cohonina Culture dating from approximately A.D. 700 to 1150. It also contains Prescott Culture pueblos which date to the same period. The western Cohonina sites have never been studied.

The area also has a prehistoric agricultural site. Only one other site of this type has been recorded in the resource area. Agricultural activities away from the main rivers were extremely rare in northwestern Arizona.

Under the all suitable alternative, construction of impoundments, diversions, straightening, riprapping, and other modification of the waterway or adjacent lands would be prohibited. This would protect the outstandingly remarkable cultural values associated with the waterway by preserving current waterway conditions.

Scenic river management would restrict patents to the mineral estate. Excluding the surface estate from patents would insure that federal protection would continue after mining has ceased. This would protect the outstandingly remarkable cultural values from potential degradation from minerals activities.

Additional protection for the outstandingly remarkable scenic values would be supplied by the ongoing management activities described in Chapter II. For example, any new proposals for activities that could result in increased use or surface disturbance would be reviewed by a cultural resource specialist.

In most cases, a cultural resource field inventory of the potentially affected area would be completed. If sites are evaluated as eligible for the National Register of Historic Places, they would be avoided by the proposed activity. If avoidance is not possible, impacts would be mitigated through a data recovery program developed in consultation with the State Historic Preservation Officer. Protection measures, such as fencing or periodic patrolling, would be

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developed for selected cultural resources that have either a high level of significance or a history of vandalism.

In the event cultural resources are discovered during mining activities, the area manager would be contacted immediately.

• Conclusion

The outstandingly remarkable cultural values would receive long-term legislative protection under the Wild and Scenic Rivers Act. There would be no impacts to the outstandingly remarkable cultural resource values from implementation of the all suitable alternative.

Impacts on Minerals

According to the U.S. Geological Survey the river area has no potential for oil and gas, coal, sodium or other saline minerals. The area has low potential for metallic minerals. There are no sand and gravel pits operating, and there are no non-metallic mines in the river study area.

There are five active mining claims in the study area. Very little activity has occurred in the past several years.

Under the all suitable alternative, scenic river management would restrict patents to the mineral estate. While this might have some affect on operators who need outside financing, impacts would be negligible.

In accordance with the management actions of the Wright and Cottonwood Creeks Riparian and Cultural Areas of Critical Environmental Concern Plan, the riparian zones, totalling approximately 325 acres, would be recommended for withdrawal from mineral entry. Bureau of Land Management approval would be required for plans of operations for all mineral activity above the level of casual use.

Mineral leasing would be allowed in the riparian zones with no surface occupancy. In other areas, leasing would be subject to the appropriate stipulations designed to protect resource values, such as limiting the number and width of new and upgraded roads. No mineral material disposals would be allowed in riparian zones. The Bureau of Land Management also would acquire 171 acres of nonfederal surface and subsurface estates.

New mining claims and mineral leases would be allowed, according to the Wild and Scenic Rivers Act.

Outside the riparian area, although the mineral potential is low, one small mine and one moderately sized mine are projected to develop. These would disturb approximately nine acres. Access roads would cover four miles. The mines would employ 10 people. No new mining activity involving mines over five acres is anticipated in the study area.

• Conclusion

There would be no adverse impacts on mining from the implementation of the all suitable alternative.

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V. CONSULTATION AND COORDINATION

A. INTRODUCTION

The Wright Creek Wild and Scenic River suitability environmental impact document was prepared by a Bureau of Land Management interdisciplinary team of resource specialists. Preparation of the environmental impact document began in January, 1993.

B. ELIGIBILITY

A determination was made in the Kingman Resource Management Plan (1993) that Wright Creek was eligible for further wild and scenic river study. This determination was based on full public involvement in compliance with the National Environmental Policy Act. The Kingman Resource Management Plan is on file at the Kingman Resource Area Office, Kingman, Arizona, and the Phoenix District Office, Phoenix, Arizona.

C. PUBLIC INVOLVEMENT

A series of 14 scoping meetings were held in Arizona and St George, Utah during March and April, 1993. The scoping meetings, held in communities and cities in 12 of the 15 Arizona Counties, were announced in the Federal Register and local media. Over 450 people attended these meetings. Comments on issues and concerns were submitted to Bureau of Land Management personnel at the meetings either orally or in written Statements. The public also was encouraged to mail comments on issues or concerns to Bureau of Land Management offices.

Scoping meetings specifically highlighting the Wright Creek study area were held in Kingman April 6, 1993 and Phoenix on April 14. About 20 people attended the Kingman meeting and 55 to 60 attended the Phoenix meeting.

Five interagency public informational meetings

for the Wild and Scenic River Study were held in January and February. These involved the Arizona Congressional Delegation and representatives from the U.S. Forest Service, National Park Service, and the Bureau of Land Management. Meetings were held in Payson, Phoenix, Kingman, Thatcher, and Tucson.

In addition to the public meetings, efforts of the Bureau of Land Management to inform agencies and interested groups and individuals occurred on three different levels. One of these levels involved printed information. At the project's outset a Notice of Intent was published in the Federal Register February 19, 1993. The notice identified the purpose and need, preliminary alternatives and issues, and solicited comment from federal and local agencies, Indian tribes, and the public. Paid announcements containing the notice of intent and other information were published in Phoenix, Tucson, Kingman, Safford, and Yuma newspapers. Three wild and scenic river updates providing progress information and requesting comments were prepared and mailed to about 1,000 people throughout Arizona.

Another type of effort to involve agencies and the interested public occurred with the preparation of the internal suitability assessment report. Individual suitability assessment reports were developed in resource area offices. In completing this task, contacts and meetings were held with agencies and groups at the local and county levels. About 150 copies of the final document containing the individual reports were mailed from the state office to the Arizona Congressional delegation, federal and state agencies, and interested groups and individuals. Copies of the final suitability assessment report were placed on file in the resource and district offices and also were placed in local libraries.

In a third type of effort, Bureau of Land Management managers and staff in the resource

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area and district offices conducted formal and informal consultation meetings, and made personal contact, with representatives of federal and state agencies, Indian tribes, and interested groups and individuals. In several cases groups invited Bureau of Land Management employees to speak at meetings. Local newspapers and radio stations also interviewed Bureau of Land Management personnel. The meetings and contacts involved the Congressional delegation, county commissioners, state agencies, elected and appointed city officials, and personnel from federal agencies (i.e.: the U.S. Forest Service, U.S. Fish and Wildlife Service) and interest groups (i.e.: Arizona Rivers Coalition, Nature Conservancy, People for the West). Additional information about these contacts are available for review at resource and district offices.

Over 2,000 copies of the draft environmental impact statement were distributed for a 90-day public review period. During the review period the Bureau of Land Management conducted public hearings in Phoenix, Kingman, Tucson, and Safford Arizona and St. George, Utah. Copies of letters commenting on the draft, and copies of transcripts of the public hearings are contained in Chapter 5 of the Final Statewide Arizona Wild and Scenic Rivers Legislative Environmental Impact Statement.

D. PREPARERS

This Wild and Scenic Rivers Environmental Impact Document was prepared by two interdisciplinary groups of resource specialists. Members of the Core Group were the primary writers of the document. They are:

D. Curtis, Planning and Environmental Coordinator, Yuma District; 15 years with the Bureau of Land Management; BS, Wildlife Biology, University of Nevada, Reno.

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Members of the Review Group reviewed the document for consistency. They are:

P. Buff, Assistant District Manager, Minerals, Phoenix District.

J. Gaudio, Realty Specialist, Safford District, Tucson Resource Area.

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The document was prepared under the direction of H. Kast, Deputy State Director, Division of Lands and Renewable Resources, P. Moreland, Branch Chief, Planning, Environment, Lands and Recreation, and as a project of the Outdoor Recreation Program, T. O'Sullivan, Senior Technical Specialist. K. Pearson assisted as project manager.

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